

**Royal Astronomical Society**

**Annual Report and Accounts**

31 December 2015

Charity Registration Number 226545

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## Reference and administrative details of the charity, its trustees and advisers

<b>Patron</b>	<b>Her Majesty the Queen</b>
<b>Council Members</b>	<p>The Council is elected in accordance with the terms and conditions laid down in the Society's Royal Charter and its associated byelaws.</p> <p>The Council members who served during 2015 were:</p> <p>Professor Martin Barstow (President, A, University of Leicester)</p> <p>Professor John Zarnecki (President elect from May 2015, G, Open University)</p> <p>Professor Mike Edmunds (Vice-President, A, University of Cardiff)</p> <p>Professor James Wild (Vice-President, G, University of Lancaster)</p> <p>Professor Andrew Norton, (Vice President until May 2015, A, Open University)</p> <p>Professor Gillian Foulger, (Vice President until May 2015, G, University of Durham)</p> <p>Professor Don Kurtz (Vice President from May 2015, A, University of Central Lancashire)</p> <p>Professor Christine Pierce (Vice President from May 2015, G, University of Durham)</p> <p>Professor Mike Cruise (Treasurer, A, University of Birmingham)</p> <p>Professor Ian Crawford (Senior Secretary, Birkbeck College)</p> <p>Professor Lyndsay Fletcher (Secretary, G, University of Glasgow)</p> <p>Dr Mandy Bailey (Secretary, A, Liverpool John Moore University)</p> <p>Mr Charles Barclay (Councillor until May 2015, A, Marlborough College)</p> <p>Professor Richard Davis (Councillor until May 2015, A, University of Manchester)</p> <p>Dr Helen J Fraser (Councillor until May 2015 A, Open University)</p> <p>Dr Sheila Peacock (Councillor until May 2015, G, AWE Blacknest)</p> <p>Dr Geraint Jones (Councillor until May 2015, G, University College London)</p> <p>Dr Caitriona Jackman (Councillor from May 2015, G, University of Southampton)</p> <p>Dr Stephen Serjeant (Councillor from May 2015, A, Open University)</p> <p>Professor Mike Bode (Councillor from May 2015, A, Liverpool John Moore's University)</p>

## Reference and administrative details of the charity, its trustees and advisers

### Council Members

(continued)

Dr Joanna Barstow (Councillor from May 2015, A, University of Oxford)

Dr Sara Russell (Councillor from May 2015, G, Natural History Museum)

Professor John Brown (Councillor, G, University of Glasgow)

Professor Martin Bureau (Councillor, A, University of Oxford)

Dr Stacey Habergham (Councillor, A, Liverpool John Moore's University)

Miss Jane MacArthur (Councillor, G, University of Leicester )

Dr Sarah Matthews (Councillor, G, UCL, Mullard Space Science Laboratory)

Dr Simon Mitton (Councillor, A, University of Cambridge)

Professor Paul Murdin (Councillor, A, University of Cambridge)

[Note: "A" signifies all areas of astronomy & astrophysics; "G" covers geophysics, solar-terrestrial physics and planetary sciences, respectively.]

### Senior Staff

Executive Director: Pamela Mortimer

Deputy Executive Director: Robert Massey

### Registered and Principal Office

Burlington House  
Piccadilly  
London  
W1J 0BQ

### Charity registration number

226545

### Auditor

Buzzacott LLP  
130 Wood Street  
London  
EC2V 6DL

## Reference and administrative details of the charity, its trustees and advisers

**Bankers** HSBC Bank plc  
West End Corporate Banking Centre  
70 Pall Mall  
London  
SW1Y 5EZ

National Westminster Bank  
St James' & Piccadilly Branch  
PO Box 2 DG  
208 Piccadilly  
London  
SWJ 9HE

**Investment  
managers** Newton Investment Management Ltd  
The Bank of New York Mellon Centre  
160 Queen Victoria Street  
London  
EC4V 4LA

**Solicitors** Bristows  
3 Lincoln's Inn Fields  
London  
WC2A 3AA

### EXECUTIVE SUMMARY

The Royal Astronomical Society (RAS) encourages and promotes the study of astronomy, solar-system science, geophysics and closely related branches of science. The Society is striving to become a modern, forward looking as well as outward facing organisation that promotes Astronomy (A) & Geophysics (G) to the widest possible public audience. Carrying out more extensive public engagement, outreach and education activities and modernising the governance of the Society were key features in 2015.

Enhanced public engagement was achieved during 2015; in particular by partnering with a range of diverse organisations such as Care4Carers, the Workers' Education Association, the Prince's Trust, the National Autistic Society, the National Space Centre and the University of Aberystwyth working with arts professionals at the National and Urdd Eisteddfods, as part of the RAS 200: Sky and Earth programme, a multifaceted collection of national outreach and education projects to be conducted over the period 2015 to 2020 in celebration of the Society's 200 year anniversary. The Society awarded a total of £444,000 to the six new partner organisations who will deliver outreach and education projects that will bring A & G to new audiences.



Burlington House, with its prestigious tenants, including the Royal Academy of Arts, the Linnean Society, the Royal Society for Chemistry, the Geological Society of London, the Society of Antiquaries and the Royal Astronomical Society, provides a cultural campus for Science and Art in Central London. In January 2015 the Society was very pleased to host a vibrant photographic display by the Royal Photographic Society celebrating the International Year of Light in the courtyard of Burlington House; this was a very successful event that highlighted the combination of science and art and had an estimated footfall of 26,000 visitors.

**EXECUTIVE SUMMARY (continued)**



Art & science were again combined in September when the Society provided a cosmic salon for the Royal Academy of Art's late night event celebrating the artist Joseph Cornell's fascination with the cosmos.



The Society engaged more with children during the year, with special events set up in the library to showcase some of the unique and special books and heritage assets to fascinate the younger generation. For the first time the Society ran a GCSE Astronomy class, taught by the Diversity, Education and Outreach Officer with 25 students. Caroline Herschel (an actress in costume) introduced the Society to the 440 visitors who attended Open House in 2015 and special activities were put on to entertain the many children who attended.

**EXECUTIVE SUMMARY** (continued)



The Solar eclipse in March was another highlight of the year and a real opportunity to engage the public. The Society worked with the Society for Popular Astronomy to produce an information leaflet and participated fully in the event organised by the Baker Street Irregular Astronomers held in Regents Park, where nearly 1,000 people attended.

To further modernise the governance of the Society, it reviewed its governing byelaws during 2015. Whilst less exciting than the developments in external engagement undertaken in year it was essential to set the Society on a more modern and user-friendly footing so that improvements can continue to be made. The Fellowship approved a revised set of byelaws at the AGM in May 2015.

The Society relies upon the surplus generated by its publishing and use of the apartments at Burlington House to deliver its charitable outputs. The success of the Society's two highly respected journals, *Monthly Notices (MNRAS)* and *Geophysical Journal International (GJI)* and the publishing contract with Oxford University Press continued and provides a significant funding stream for our charitable outputs and the support of our professional activities.

The facilities in Burlington House are important to the success of the Society; improvements to the Society's apartments were completed in the year including the installation of new boilers and a window in the reception area, which along with friendly reception staff, provides a more inviting first impression on entering the building.



**EXECUTIVE SUMMARY** (continued)

The Society also continued to deliver the well-recognised set of high quality outputs that support academics and showcase the sciences of A&G: the Society ran 16 scientific meetings and supported 3 external meetings. 165 grants were made during the year for study or research projects; undergraduate bursaries; educational projects; activities related to the history of astronomy and geophysics; purchase of temporary help; purchase of instruments; the development of instrumentation for astronomy or geophysics; support of meetings and travel to conferences or expeditions. This included an increase in the number of grants awarded through the Education and Outreach Committee, and we intend to maintain a higher budget for this expenditure in the coming year. In addition, the Society awarded 3 Research Fellowships in 2015 and financially supported 5 Fellowships that started in previous years.

A highly successful National Astronomy Meeting (NAM) was held at Venue Cymru, a commercial venue, with 535 people attending (sunny) Llandudno. We expect that use of commercial venues may become more commonplace in future years as Universities are less able to host external conferences because of their own competing priorities and due to the increasing size and popularity of NAM which outstrips the capacity of many Universities.

The Awards Ceremony, hosted by Jon Culshaw during the conference dinner was a particular highlight of NAM 2015.



I believe 2015 was a successful year and that there is much to look forward to in 2016 and beyond as we celebrate the history and prestige of the Society whilst we continue to modernise and improve it to maximise the support for science and charitable outputs.

Martin Barstow  
**President**

The Trustees present their report together with the accounts of The Royal Astronomical Society (the "charity") for the year ended 31 December 2015.

The accounts have been prepared in accordance with the accounting policies set out on pages 37 to 43 therein and comply with the charity's Royal Charter and Bye Laws, the Charities Act 2011 and Accounting and Reporting by Charities: Statement of Recommended Practice applicable to charities preparing their accounts in accordance with the Financial Reporting Standard applicable in the United Kingdom and Republic of Ireland (FRS 102), effective from accounting periods commencing 1 January 2015 or later.

### **OBJECTIVES**

The RAS exists to advance, and to record the history of, our understanding of the Earth, the solar system, the galaxies and the nature of the universe. It does this by promoting Astronomy and Geophysics, interdisciplinary sciences that encompass and further our understanding of physics, chemistry, mathematics, biology, engineering and computer science to answer deep questions about the origin and fate of the cosmos, and people's place in it. Through this the Society contributes to the growth and dissemination of knowledge and thereby fulfils its charitable objective of serving the public interest.

The Society referred to the Charity Commission's general guidance on Public Benefit when reviewing its aims and objectives and in planning future activities. These disclosures comply with the Charities Act 2011.

The Society's principal objectives for 2015 were:

- ◆ To continue to broaden its engagement with the public through the provision of education and outreach projects.
- ◆ To overhaul the Byelaws that serve as the principal governance document of the Society.

The achievements that helped the Society meet its annual objectives are set out in the section below. The criteria for measuring success in these objectives were:

- ◆ For the Society to have an increased number of partners working with it to promote Astronomy and Geophysics
- ◆ For the annual outreach and education activity and expenditure level to be retained or increased
- ◆ To consult on and achieve approval from the Fellowship for a revised set of byelaws at the Annual General meeting
- ◆ To begin a system of review of other regulations subordinate to the revised byelaws.

## SIGNIFICANT ACHIEVEMENTS

This section highlights a few of the significant achievements made in 2015, in particular the progress made in the RAS 200: Sky and Earth programme, the review of governance arrangements and improvements to the premises and facilities at Burlington House.

A summary of other achievements is also included and details provided on the various strands of work in the Activities section.

### a) Public Engagement.

Increased public engagement through the provision of education, outreach and diversity projects was an aim for 2015. A key element in the Society's plan to engage with a broader range of the general public is the RAS 200; Sky and Earth programme; real progress was made on this in 2015 when the Society awarded the first tranche of RAS 200: Sky and Earth awards that will see projects starting in 2016.

The A&G article on RAS 200: Sky and Earth available at <https://www.ras.org.uk/images/RAS200.AandG.pdf> provides detail on the chosen projects.

The Society also increased its engagement with school children and teachers. An exciting new initiative was started in September 2015 with the Society providing a free GCSE Astronomy course for the first time, with 25 pupils from 6 schools across London and a staff member from both the British Astronomical Association and the Society. Also, 28 teachers attended a very successful teacher training day held as part of the National Astronomy Meeting 2015.

The Solar eclipse on 20 March 2015 was an ideal opportunity to increase public awareness and engagement in Astronomy. The Society, jointly with the Society for Popular Astronomy, published an information booklet for the public and schools on how to view an eclipse and made 1,000 solar viewers available for distribution. Despite the clouds on the day the public viewing event organised with the Baker Street Irregular Astronomers in Regent's Park was very successful with almost 1,000 people attending.



## **SIGNIFICANT ACHIEVEMENTS** (continued)

### **a) Public Engagement** (continued)

In January 2015 the Society was delighted to host a colourful photographic display by the Royal Photographic Society celebrating the International Year of Light (IYOL) in the courtyard of Burlington House; this was a very successful event that highlighted the combination of science and art and had an estimated footfall of 26,000 members of the public.



Via its membership of the UK steering group, the Society also sponsored public engagement activities throughout the rest of the IYOL. Over the year, at least 40 UK events included astronomy as a major theme. Venues for these included planetariums, museums and science centres, universities and cafes.

The introduction of evening public lectures and wider advertising for these events increased the number and range of people who were able to participate; record numbers of attendees were achieved with events often being oversubscribed.

The RAS is now in partnership with the European Space Education Resource Office (ESERO), and our Education, Outreach and Diversity Officer is a designated Space Ambassador. ESERO provide a grant to support visits to local schools (in London) and for those schools to visit the RAS premises in Burlington House.

Over the course of 2015 the Society worked with a total of 723 pupils in 5 schools, making multiple visits to provide significant support to students and teachers.

Another new programme was developed that saw an actor playing Caroline Herschel talking with three visiting school groups (a total of 90 children), and making use of the historical resources of the RAS Library. This was so successful that Caroline was also invited to host at the Open House event in September, where the Society opened its doors to 455 members of the public and provided entertainment for the children who attended.

**SIGNIFICANT ACHIEVEMENTS** (continued)

**a) Public Engagement** (continued)

Unfortunately the launch of a website for the successful A&G magazine was not possible in year because of limited (albeit valuable) in-house IT support and delays with the external website contractor; this is now expected to launch at the National Astronomy Meeting in June 2016.

**b) Governance Review**

The Society was successful in making a substantial, much needed and overdue change to its governance arrangements by reviewing the governing byelaws. The Fellowship was fully involved and consulted on the proposed changes that were approved at the AGM in May 2015. In addition, the Society reintroduced the Universal Ethical Code for Scientists that applies to all Fellows and agreed to draft a Code of Conduct for Fellows; this will be done during 2016.

The Society also reviewed the following subordinate documentation to the byelaws:

- ◆ the Regulations for Associateship (Honorary Fellowships), these were approved at the AGM in May 2015;
- ◆ the Terms of Reference of the many of the Committees (this process will be ongoing throughout 2016);
- ◆ the regulation of the scrutiny of the ballot; and
- ◆ introduced the Diversity, Equality and Inclusion policy, this was approved in July 2015

[https://www.ras.org.uk/images/Diversity\\_Equality\\_Inclusion\\_policy.pdf](https://www.ras.org.uk/images/Diversity_Equality_Inclusion_policy.pdf)

The Society, along with four other courtyard societies, continued to negotiate with the landlord on the renewal of the lease for Burlington House; more detail is given under the section on risk, on pages 17 to 18.

Another significant change to the Governance of the Society was that on 31 July 2015 the Society ceased to be a Trustee of the Herschel House Trust Museum. The Society agreed to a variation to the Trust deed to allow Bath Preservation Trust to become the sole Trustee body and provided a £10,000 grant to the Herschel House Trust in support of its charitable objectives.

## SIGNIFICANT ACHIEVEMENTS (continued)

### c) Modernisation of Facilities



The facilities in Burlington House are important to the success of the Society; improvements to the Society's apartments were done during the year, including the installation of new boilers in the basement and a window in the reception area, which, along with friendly reception staff, provides a more inviting first impression as visitors enter the building.

Other infrastructure improvements included purchasing a new telephone system. As the Society had been under supported in IT matters for many years, following appointment in 2014 the IT and Information Manager has had a very long task list.

During 2015 (and the early part of 2016) substantial progress was made on the following websites that have been built and developed:

- ◆ <http://solareclipse.ras.ac.uk> – A site where visitors could place a pin for their location when viewing the solar eclipse.
- ◆ <http://women.ras.ac.uk> – A brochure site celebrating 21 women of the RAS, to mark the 100<sup>th</sup> anniversary of the election of women to fellowship.
- ◆ <https://fellows.ras.ac.uk> – A web application for fellows to safely and securely view the personal data that is held about them by the RAS, and to facilitate payment of their subscription online.
- ◆ <http://courses.ras.ac.uk> – A virtual learning environment for the students currently studying GCSE Astronomy at the RAS (using the Moodle platform).
- ◆ <http://rascommunity.org> – A hosting solution for Fellows to host their own websites of particular use to the affiliated bodies such as the scientific interest groups.
- ◆ <http://nam2015.org> – A brochure site for promoting NAM 2015, including a web application for managing abstract submissions.
- ◆ <http://helpdesk.rascommunity.org> – A helpdesk for tracking IT issues raised by RAS staff.

The public lectures and talks given at the Ordinary meetings are now recorded; 31 lectures have been made available online via the new RAS YouTube channel via our website:

<http://www.ras.org.uk/events-and-meetings/public-lectures/public-lecture-videos>

This will be a benefit to Society members who are unable to attend scientific meetings in person and to interested members of the public.

### **OTHER ACHIEVEMENTS FOR 2015**

Other achievements for 2015 are summarised below and further detail provided in the Activities section and/or on the Society's website: [www.ras.org.uk](http://www.ras.org.uk)

#### **Publications**

The Society's publisher is Oxford University Press and the partnership has been very successful. The RAS owns two primary research journals, Monthly Notices of the Royal Astronomical Society (MNRAS) and Geophysical Journal International (GJI). These journals are world-leading in respect of both size and quality.

The number of papers submitted to MNRAS in 2015 increased by 10%. The number of papers submitted to GJI in 2015 increased by 6%.

#### **Diversity**

The Society developed a policy on diversity and equal opportunities, covering members, staff and the communities that the Society represents, [https://www.ras.org.uk/images/Diversity\\_Equality\\_Inclusion\\_policy\\_2015.pdf](https://www.ras.org.uk/images/Diversity_Equality_Inclusion_policy_2015.pdf)

In 2015 the RAS signed a Memorandum of Understanding with STEMNET, to support a new diversity ambassadors' scheme. This allows Fellows to claim for the expenses associated with outreach visits to schools that meet certain criteria, for example a high percentage of children eligible for free school meals.

Since the scheme launched there has been a low take-up, with just two enquiries so far. In partnership with STEMNET and others, the Society will make further efforts to promote it in the year ahead.

2016 will be a very important year for the Society as it celebrates the centenary of women being appointed to the Fellowship; during 2015 the Society planned a range of activities to celebrate this event in 2016.

#### **Personnel/Resources**

The Society appointed a new accountant in April 2015 and retains the services of a consultant as the senior accountant. Two new Assistant Editors were employed in 2015 (one of these posts was an additional post created in response to an increase in MNRAS papers processed annually) and a minor staff reorganisation brought the reception and membership responsibility within the small team managed by the Awards, Events and Office Manager.

Details of staff changes in 2015 are provided in the Activities section. Details on the remuneration of key management personnel are disclosed in the financial review section.

## **OTHER ACHIEVEMENTS FOR 2015** (continued)

### **External meetings**

The Society continued to host the Astronomy Forum, Solid-Earth Geophysics Forum and External Geophysics Forum; these are informal bodies that bring together senior academics and policymakers.

The Society's premises were made available to outside organisations including the following: Anatomical Society, Antiquarian Horological Society, Artists' General Benevolent Institution, Association of Pall Mall Libraries, Association of Retired ESA Staff UK Branch, British Antarctic Survey, British Astronomical Association, British Deer Society, British Institute of Radiology, Daphne Jackson Trust, European Association for Astronomy Education, Inspiring Futures, London Cosmology, Mullard Space Science Laboratory, Pistoia Alliance, Royal Society of Asian Affairs, SEPnet, UK Space Agency, University College London, University of Central Lancashire, University of Hertfordshire, University of Leicester, University of Portsmouth, University of Sussex and the Webb Society.

### **Consultations**

The Society contributed direct evidence to 4 consultations, a list of which is provided in the Activities section, and cooperated with the Science Council on one further response.

### **Political engagement**

The Society continued to maintain and develop links with external decision makers including Members of the UK and European Parliaments and senior Officials. A list of meetings is provided in the Activities section.

### **Policy research**

The Society carried out a survey of the demographic characteristics of its own membership, and co-funded a project with the Institute of Physics on the experiences of male and female PhD students.

### **Education and Outreach programme**

In addition to the RAS 200: Sky and Earth programme highlighted in the significant achievements section of this report, the Society maintains a significant annual programme of other education and outreach activities. Details of key events in 2015 are provided in the Activities section.



## **OTHER ACHIEVEMENTS FOR 2015 (continued)**

### **International**

Progress this year in making public lectures and A&G ('Ordinary') meetings available on line is a benefit to the community based overseas who are unable to attend meetings in person and the wider public.

The RAS Gold medal winner, Professor Carlos Frenk, presented at the AAS winter meeting in January 2015. Unfortunately, the AAS Russell lecturer was unable to attend NAM due to ill health but a video was shown.

The first exchange lecture with the Indian Society for Astronomy took place in February 2015; it is hoped that this will become an annual event.

### **Astronomy in Europe**

The Society was instrumental in obtaining agreement of the members of the European Astronomical Association to employ an individual who will work on a part time basis as the European Parliament Point of Contact for all European Astronomical Societies. In the first instance the Society will underwrite the cost of this new position that will be paid for by several European Astronomical Societies.

### **International Astronomical Union (IAU)**

The Society continued to support the IAU's Office for Astronomy Development and made available funds for visits by UK astronomers to developing countries under this Office's Visiting Experts Programme.

The President and Treasurer attended the IAU General Assembly, held in Honolulu in August 2015 and challenged the IAU to improve the management of the official business, in particular the financial information and reporting that was not adequate. The Society will keep this matter under review as it is essential that the IAU has acceptable financial systems in place before the Society delivers payment for national membership dues.

### **Scientific meetings**

A monthly programme of meetings (excluding the Summer break between June and September) was held in Burlington House, comprising parallel Specialist Discussion meetings (covering topics in astrophysics, solid-earth geophysics, solar-terrestrial physics, and planetary sciences), followed by the A&G ('Ordinary') meeting, with a broader programme of more general interest open to the public. Meeting reports were published, with financial assistance from the RAS, by the Observatory journal. Typically audiences for the Specialist Discussion meetings exceeded 50 and for the A&G ('Ordinary') meeting 100.

## OTHER ACHIEVEMENTS FOR 2015 (continued)

### Awards and Medals

The Society's awards and medals continued to be highly valued by their recipients, representing, as they do, the recognition by their peers of outstanding achievement. Details on the recipients of the 2016 medals and awards, selected in 2015, are available on the RAS website: <https://www.ras.org.uk/awards-and-grants/awards/2553-winners-of-the-2015-awards-medals-and-prizes>

### Friends of the RAS

There were approximately 208 Friends of the RAS during 2015. Marcus Hope, the volunteer leader of the Friends programme, provided an impressive programme of lectures; topics included 'An absence of God or a surer path to God? The dialogue of contemporary cosmology with theology'; 'The Cosmic Cocktail: Three Parts Dark Matter'; 'Astronomy of the Pharaohs; Building Fake Universes': 'Testing cosmic physics with computers'; 'Arrows of Time, Causation, and Entropy; Getting light from the darkness - the story of the biggest telescopes'; and visits to Jodrell Bank and Mill Hill Observatory, plus a Christmas drinks reception with the RAS President elect.



### Cunard

Fellows provided astronomy lectures for Cunard cruise liners as part of the on-board Insights programme.

### Library

Progress continued on making the RAS Library collections more accessible to the public and researchers. Details of library visits are provided in the Activities section.

### Press releases

The Society strives to inform the public and specialists about developments in Astronomy and Geophysics. Details on activity undertaken in 2015 is provided in the Activities section.

### Social Media

The main RAS Twitter account <http://twitter.com/royalastrosoc> has 12,796 followers, the RAS Facebook page <https://www.facebook.com/RoyalAstroSoc/> has 6,119 'likes', and the RAS LinkedIn page <https://www.linkedin.com/groups/2757561> has 2,013 members.

## **OTHER ACHIEVEMENTS FOR 2015 (continued)**

### **Social Media (continued)**

The RAS Librarian Twitter account [http://www.twitter.com/astro\\_librarian](http://www.twitter.com/astro_librarian) has 331 followers.

The RAS Outreach Twitter account [http://www.twitter.com/RAS\\_Outreach](http://www.twitter.com/RAS_Outreach) has 820 followers.

### **Supporting Students and Early Career Scientists**

In 2015 the Society made 165 awards totalling £183,305 to support travel, research and educational projects as well as awarding 3 RAS Research Fellowships; Support was also provided for speakers attending meetings.

A full list of 2015 grantees is on the RAS website and summary grant information is disclosed in note 5. The terms and conditions of the various awards are displayed on the Society webpage. <http://www.ras.org.uk/awards-and-grants/grants-for-studies/2319-applying-for-a-grant>

### **Donations**

Details of contributors are available on the RAS website.

## **RISKS**

The principal risks and uncertainties identified by the trustees are:

- ◆ Maintenance of the quality of, and income from, publications (a significant income stream of above 60%)
- ◆ Open Access Publishing
- ◆ Ensuring affordability of rent and service charges for the premises at Burlington House

The Finance Committee regularly reviews the Society's risk register and the Council annually reviews the major risks to which the Society is exposed and systems that have been established to manage those risks. In regards to the three most significant risks:

- ◆ The Society insists that rigorous peer review is used to maintain the quality of the two journals and thereby the demand by authors and readers for the highly successful publications and with the publishers ensure that the Society adopts a robust business model for production and sales. The financial surplus generated by the journals is used to support scientific meetings, travel grants for students, summer bursaries for undergraduates and public outreach.

**RISKS** (continued)

- ◆ The trustees are mindful of the uncertainty that the potential impact of UK and International policies on Open Access Publishing provides. Together with Oxford University Press, the Society's publishing partner, the Editorial Boards and staff monitor developments in this area and consider how the RAS business model would be affected if Open Access had a significant effect. A designated fund for the possible impact of Open Access has been established.
  
- ◆ In 2005, to ensure affordability of rent and service charges for the accommodation in Burlington House, the Society and four other Courtyard Societies signed a lease with the Government for their accommodation in Burlington House. A series of eight, 10-year leases secured accommodation in Burlington House until 2085. The Courtyard Societies, as tenants, have the automatic right to renew their lease on the same terms at every 10-year break point. The first 10-year lease expired on 31 January 2015. With the other Courtyard Societies (excluding the Royal Academy that has a different lease) the Society entered into arbitration with the landlord, the Department for Communities and Local Government, on the process to conduct rent reviews and did not sign the lease. The Society has continued to pay service charges during this period whilst it has been in negotiation over the rental charges and has set aside funds for rent payable pending the resolution of the arbitration. The final report from the arbitration is expected by May 2016. Regardless of the outcome of the arbitration the trustees believe that the Society has resources to cover the estimated increased rental charges for the next decade.

Other key risks identified and their mitigation measures include:

- ◆ Maintenance of the (listed) premises (by regular repair and refurbishment).
  
- ◆ Maintenance of the size of the membership (by regular review of services and subscriptions).
  
- ◆ The trustees consider the fluctuations in investment fund values and variability of investment returns to be a risk of the Society. The fund, Newton Growth and Income fund for charities, is actively and expertly managed and administered by Newton Investment Management. Funds are invested in a diverse portfolio comprising commodities, equities, bonds and gilts. This managed strategy mitigates fluctuations in fund values and seeks opportunities for fund growth and income. The trustees consider this approach mitigates the subsequent exposure to any investment risk.

## **STRUCTURE, GOVERNANCE AND MANAGEMENT**

The Royal Astronomical Society ('RAS') was founded in 1820 and is incorporated by Royal Charter and managed according to Byelaws that were revised at the Annual General Meeting in May 2015. The RAS's objectives, charters, byelaws and committee organisation are detailed on the society's website [www.ras.org.uk](http://www.ras.org.uk).

The control of the Society rests with the General Meeting of Fellows. Subject to that, direction and management is the responsibility of the Council (that serves as the Board of Trustees). The Board of Trustees (Council) consists of a President, a Treasurer and three Secretaries together with four Vice-Presidents and twelve Councillors. In addition the President elect attends Council one year prior to taking up post.

### **Trustee recruitment and appointment**

Annually, the full membership of the Society is asked to nominate themselves or other members of the Society to available positions on Council. A nomination must be supported by two other members of the Society. Council approves the ballot list and this together with a narrative on each candidate is sent to the full membership for their consideration prior to casting their votes. Voting can be done electronically, by post or in person at the Annual General Meeting.

Members of the Council are elected by ballot at the Annual General Meeting, for the following normal and maximum terms of office, as set out in the Byelaws. In summary:

- ◆ President, two years
- ◆ Vice-Presidents, two years
- ◆ Treasurer and Secretaries, five years
- ◆ Councillors, three years.

To correct an error made during the 2012 election process, terms of office of one Councillor will be non-standard until 2016. In 2015 one Councillor was appointed for a two year term only. Standard terms will be used from 2016.

### **Trustee induction**

New members of Council attend a Trustee Induction programme before their first Council meeting. In 2015 new Council members were offered training on the roles and responsibilities of RAS Trustees. All members of Council are asked to complete a conflict of interest declaration and to sign a Trustee declaration form.

## **STRUCTURE, GOVERNANCE AND MANAGEMENT** (continued)

### **Organisational structure**

The RAS Council normally meets 6 times during the year and its function is to direct, on behalf of the Society, all the affairs and business of the Society. Council appoints standing committees (Publications Management, Editorial (for each journal), Outreach and Education, Finance, International, Membership, Library, Astronomical Heritage, Committee for Diversity in Astronomy and Geophysics) and ad hoc committees (e.g. Awards) to forward its objectives.

It appoints the managing editors and editors of the Society's research journals, Monthly Notices of the Royal Astronomical Society and Geophysical Journal International who provide their services, as does the Treasurer, for an honorarium.

The Society has formal associations with a number of organisations having shared interests, and has less formal arrangements with several other bodies. These include:

- ◆ The British Geophysical Association, jointly sponsored by the RAS and the Geological Society of London to represent Solid Earth Geophysicists whose interests fall within the remits of both parent societies.
- ◆ The Paneth Meteorite Fund that the Society administers under the direction of the Paneth Fund trustees.
- ◆ The Society is the UK national member organisation of the International Astronomical Union and the European Astronomical Society and is represented on the UK Panel of the International Union of Radio Science.
- ◆ In 2015 the Society ceded its trusteeship of the Herschel House Museum, Bath. The section on governance provides details.
- ◆ The Society is represented on a number of organisations including the Science Council, the Parliamentary and Scientific Committee and the Campaign for Science and Technology.
- ◆ The Society recognises the appeal of astronomy and geophysics to the general public by offering annual membership to Friends of the RAS for a small fee. Friends' benefits include a series of Friends-only lectures, as well as priority seating for the Society's popular public lectures, visits to observatories and science centres, use of the Society's Library, as well as a reduced subscription to the Society's 'house journal' Astronomy & Geophysics.

### **EVENTS SINCE THE YEAR END AND PLANS FOR THE FUTURE**

In 2016 and beyond the Society will continue to broaden its engagement with the public through the provision of education, outreach and diversity projects. Specifically, the Society will:

- ◆ Evaluate the success of the first tranche of RAS 200: Sky and Earth projects that will begin in 2016 and call for the second tranche of funding proposals.
- ◆ give consideration to possible new membership categories that may be required in response to the increased engagement portfolio.
- ◆ launch a website for A&G.
- ◆ continue to provide a free GCSE Astronomy course.
- ◆ run a teacher training day as part of the NAM 2016 conference.
- ◆ The Library will continue to be utilised more to promote outreach and education activities and to further extend access to RAS Library collections.

### **Diversity**

The Society will celebrate the anniversary of the centenary of women being appointed to the Fellowship. A play on the history of how women became Fellows of the Society was presented at the Ordinary Meeting in January 2016 and pictures of 21 women successful in the fields of A & G will be presented on a digital display in Burlington House throughout 2016.

The Society will be the Platinum Sponsor for Ada Lovelace Day in 2016.

Additional pages of A&G magazine will be dedicated to the women of the Society.

### **Bicentenary planning**

The Society will make plans to celebrate the bicentenary of the Society in 2020. Some progress has been made in this since the year end in considering options for commemorative books to showcase the Society's treasures and history and for a children's history book.

### **Governance**

Following the byelaw review the Society will revise subordinate regulations. Progress since the year end includes consideration of a Code of Conduct for members, library regulations, regulations for conduct of the ballot and regulations on how the Society makes Awards and Honours.

The Society, along with the four other courtyard societies will continue to negotiate with the landlord on the renewal of the lease for Burlington House and will together promote Burlington House as a unique and important arts and science cultural hub.

## EVENTS SINCE THE YEAR END AND PLANS FOR THE FUTURE (continued)

### Governance (continued)

The Society will review how it should best use its heritage assets to support the objectives of the Society, including as part of the planning for how the Society will celebrate its 200 year anniversary in 2020.

### Facilities

The Society will continue to make improvements to the electronic infrastructure including improving the record management system.

The physical infrastructure of Burlington House will need basic maintenance during 2016. No significant expenditure is planned, although the lift will require expenditure of approximately £15,000 in the next few years.

In addition to the specific objectives listed above the Society will continue to deliver its set of high quality outputs. The Society will:

- ◆ Continue to publish high quality peer reviewed journals on Astronomy and Geophysics.
- ◆ Provide leadership for UK-based career astronomers and geophysicists (whether or not they are members of the Society) engaged in research.
- ◆ Continue to help the Government by presenting the case for sustained and significant public funding of astronomy and geophysics research and teaching.
- ◆ Sustain its support of students and early career scientists by continuing to provide RAS Research Fellowships and grants.
- ◆ Continue to recognise achievements in Astronomy and Geophysics by the award of medals and prizes, including in 2016 launching the Annie Maunder Medal that will be awarded to an individual for an outstanding contribution to outreach and public engagement. This medal will be open to nominees from anywhere in the world involved in outreach or public engagement, including those whose main occupation is outreach or public engagement.
- ◆ Continue to review the business model to embrace and benefit from the move towards Open Access publishing.
- ◆ Maintain a renowned programme of specialist discussion meetings and public lectures series.
- ◆ Continue to support the successful 'Friends of the RAS' programme.
- ◆ Host a National Astronomy Meeting; this will be held in Nottingham in late June 2016.



## ACTIVITIES

### The Fellowship

The RAS comprises some 3,964 Fellows and Honorary Fellows, of whom approximately one third are based in some 65 overseas countries; 22% are under the age of 34 and 28% are over 65; approximately 16% of the total membership is female (of which 43% are under 34, 45% are aged 34 to 65 and 11% are over 65). It is entirely funded by subscriptions from its members, gifts from donors, the income generated by its activities, largely from its scientific journals, and investment income.

### Personnel/Resources

The following staff changes occurred in 2015.

- ◆ Mark Piper was appointed as the RAS accountant in April 2015. The Society retains the assistance of Michael Kyriakides as the senior accountant and will continue to do so for some time to come.
- ◆ Beth Gaskell was appointed as a part-time library assistant in May 2015.
- ◆ Meron Kassa was appointed as an Administrative Officer in May 2015 and works mainly on membership matters.
- ◆ Sam Lindsay was appointed as an Assistant Editor in May 2015. Sam is also assisting with media and press.
- ◆ Morgan Hollis was appointed as an Assistant Editor in June 2015. Morgan is also assisting with media and press.
- ◆ Clare McLoughlin replaced Sheila Kanani as the Education, Outreach and Diversity Officer whilst Sheila is on maternity leave from December 2015.

### Consultations

The Society gave written evidence to:

- ◆ DfE consultation on the future of GCSE and A level courses  
[http://www.ras.org.uk/images/stories/ras\\_pdfs/Policy%20Papers/GCSE\\_Astronomy\\_consultation.pdf](http://www.ras.org.uk/images/stories/ras_pdfs/Policy%20Papers/GCSE_Astronomy_consultation.pdf)
- ◆ BIS Consultation on Postgraduate Funding  
[http://www.ras.org.uk/images/stories/ras\\_pdfs/Policy%20Papers/BIS\\_consultation\\_on\\_postgraduate\\_funding.pdf](http://www.ras.org.uk/images/stories/ras_pdfs/Policy%20Papers/BIS_consultation_on_postgraduate_funding.pdf)
- ◆ House of Commons Science and Technology Committee: Inquiry into the Science Budget  
[http://www.ras.org.uk/images/stories/ras\\_pdfs/Policy%20Papers/Science\\_and\\_Technology\\_Committee\\_Budget\\_2015\\_final.pdf](http://www.ras.org.uk/images/stories/ras_pdfs/Policy%20Papers/Science_and_Technology_Committee_Budget_2015_final.pdf)

## ACTIVITIES (continued)

### Consultations (continued)

- ◆ House of Lords Science and Technology Committee: Relationship between EU membership and the effectiveness of UK science  
[http://www.ras.org.uk/images/stories/ras\\_pdfs/House\\_of\\_Lords\\_Science\\_and\\_Technology\\_Committee\\_EU\\_final.pdf](http://www.ras.org.uk/images/stories/ras_pdfs/House_of_Lords_Science_and_Technology_Committee_EU_final.pdf)
- ◆ (*With the Science Council*) Department of Business, Innovation and Skills consultation on Support for Postgraduate Study  
<http://sciencecouncil.org/web/wp-content/uploads/2015/12/BIS-PG-Study-consultation-final-version.pdf>

### Policy statement

Together with 23 other learned societies, the RAS signed the Climate Communiqué urging action on climate change at the COP21 summit in Paris in November 2015. See [http://www.ras.org.uk/images/stories/ras\\_pdfs/Policy%20Papers/21-07-15-climate-communication.PDF](http://www.ras.org.uk/images/stories/ras_pdfs/Policy%20Papers/21-07-15-climate-communication.PDF)

### Policy research

The Society carried out two surveys:

- ◆ IOP / RAS report: Gazing at the Future: The experiences of male and female physics and astronomy doctoral students in the UK  
[http://www.ras.org.uk/images/stories/ras\\_pdfs/Policy%20Papers/file\\_65624.pdf](http://www.ras.org.uk/images/stories/ras_pdfs/Policy%20Papers/file_65624.pdf)
- ◆ "Who are we now?", A&G article on RAS membership survey  
[http://www.ras.org.uk/images/stories/ras\\_pdfs/Policy%20Papers/1505.08051.pdf](http://www.ras.org.uk/images/stories/ras_pdfs/Policy%20Papers/1505.08051.pdf)

### Political engagement

The Society continued an active programme of engagement with elected politicians and policymakers in government. Key events during 2015 include attendance (with an RAS stall and publications) at the assemblies in Edinburgh, Cardiff and Belfast, as well as at the UK parliament at Westminster.

RAS staff and officers also attended a number of less formal events in Parliament, meeting with MPs, peers and others. As part of the International Year of Light, the Deputy Executive Director gave a presentation on astronomy to MPs including the then Science Minister.

RAS-nominated young scientists attended the 'Voice of the Future' question time event, to ask ministers, MPs and senior civil servants about the future of UK science. And in the run up to the Spending Review, Fellows were encouraged to write to MPs arguing for a good budget settlement for science.

## **ACTIVITIES** (continued)

### **Political engagement** (continued)

Collaboration with other learned societies such as the Geological Society and the Institute of Physics shaped consultation responses. The RAS also collaborates with the Campaign for Science and Engineering and the Science Council, and participates in policy events in areas such as immigration, diversity and postgraduate funding.

The Deputy Executive Director regularly attends the pan-science Parliamentary Affairs Committee, and the policy network meetings of the Royal Society and the Royal Academy of Engineering.

### **Education and Outreach programme**

- ◆ The GCSE Astronomy class began in September 2015, and will run for two school years until June 2017.
- ◆ Via the Space Ambassadors programme the Education, Outreach and Diversity Officer, Dr Sheila Kanani worked with 723 pupils in 5 schools.
- ◆ In 2015 Sheila gave 14 public lectures, to groups including Smashfest in Deptford, the Training Partnership, the Secret Cinema showing of Star Wars, Science on Stage, SET for Britain in Parliament, Winchester Science Festival, the Royal Society, Cunard cruise ships, Cambridge Science Centre and the Science Showoff. The total audience for these was around 2,850 people.
- ◆ Two school groups visited Burlington House in 2015, with a total of 90 students.
- ◆ The RAS supported two UK pupils with bursaries to attend the ESO Astronomy Camp.
- ◆ With the IOP and STFC, the Society supported a careers event for astronomy PhD students.
- ◆ The Deputy Executive Director gave a presentation on the Society's work in public engagement and diversity at the European Week of Astronomy and Space Science conference in June.

### **Library and Archive**

- ◆ Over 1,000 visits were made to the Library in 2015, two thirds by members of the public (for comparison, there were 343 recorded visits in 2014). Visitors included local astronomical societies and people attending public lectures.
- ◆ Over 80 rare books and manuscripts were displayed, many for the first time.

## ACTIVITIES (continued)

### Library and Archive (continued)

- ◆ As mentioned above, the education, outreach and diversity officers have been working with the librarian to create an innovative programme of science, drama, art and history for visiting primary school students, focusing on comets and Caroline Herschel.
- ◆ In connection with the Royal Academy's Joseph Cornell exhibition, the RAS library and events teams collaborated with neighbouring societies to host a behind-the-scenes tour of Burlington House, allowing the public to see celestial atlases that feature in Joseph Cornell's work.
- ◆ Other examples of cross-courtyard-cooperation include involvement with the Geological Society Library's recreation of US Astronaut Harrison Schmitt's 1972 lecture.
- ◆ Books and manuscripts belonging to the RAS featured in a number of broadcasts, including Sky at Night and Newsnight.
- ◆ One of the most interesting instruments in the RAS's collection, a sextant thought to have belonged to Captain Cook, was loaned to the Science Museum for the touring exhibition 'Science and Splendour: Treasures from the Court of King George III'.
- ◆ 242 enquiries from researchers across the world were received and dealt with.
- ◆ Preparations to mark the centenary of the election of women to fellowship of the RAS have drawn on the resources of the library and archive. In 2016 articles highlighting the achievements of early women Fellows will appear in A&G and other publications.

### Press Releases

In 2015 the Society issued 66 press releases on a wide variety of topics in astronomy and planetary science. These covered stories including a possible collapse in activity on the Sun, a mooted threat to Earth from giant comets, a big haul of galaxies from a new radio telescope, and not least the near-total solar and total lunar eclipses.

Every release led to some media coverage, with those at NAM, the giant comets release, and the eclipses attracting the interest of many radio and TV outlets.

Six members of RAS staff, (the Deputy Executive Director, the Education, Outreach and Diversity Officer, two Assistant Editors and the Librarian) gave a total of 53 TV and 46 radio interviews. Highlights were the solar eclipse in March, the discovery of the Beagle 2 probe on Mars, and those based on RAS releases on comets.

## **FINANCIAL REVIEW**

There were no significant unplanned events during the year. As a result of strategic decisions taken by Council earlier, the RAS 200 initiative was approved from unrestricted reserves and these new grants amounted to a total of £444,000 of which £260,969 was recognised as expenditure up to 31 December 2015.

The Society's total funds decreased from £19,303,034 to £19,140,306 during the year, both figures including a large contribution from the Society's heritage assets (rare books, clocks, telescopes and fine art) which totalled £9,440,879 (2014: £9,589,749). The Society's income has decreased from £4,505,168 to £4,139,808. The primary reason for the reduction in income was that in the previous year the Society benefited from a one-off sale of its digital archive in the sum of £418,113. The Society's expenditure increased from £3,735,744 to £4,416,207 which is mainly due to additional grant commitments and in particular to the RAS 200 grants. Net expenditure before investment gains amounted to £276,399 (2014 - £769,424 net income).

### **Policy on reserves**

The reserves policy aims to maintain adequate financial cover for the main risks to the Society and provide in the normal way for an efficient winding-up if that ever becomes necessary. The total funds are now £19,140,306 of which £9,440,879 are held in heritage assets, leaving funds of £9,699,427 to cover the main risks and the operational needs of a going concern.

The requirement for significant reserves stems from the need to have contingency plans in place to maintain publication income if Open Access regulations distort the current business model for academic journals and to make some provision for either substantial increases in rent, or alternatively, a change in the status of our accommodation. The latter item has come under closer review during the year when the Society and four other Courtyard Societies entered into arbitration proceedings with the landlord. The Society's right to remain at Burlington House under the present lease is not in doubt, but the scale of future rent increases is as yet undetermined. The Open Access Fund and the Burlington House Fund are currently maintained at high levels to support any significant changes to the Society's operations and the General Fund is available to provide further financial support if either of these risks materialise. The General Fund is also available, should it ever be needed, to enable an orderly winding up of the Society. At present the free reserves of the Society, defined as unrestricted, undesignated funds, and excluding tangible fixed assets are £4,073,863, and these would allow operation of the Society for 11 months if publishing were continued and expenditure incurred during that period and 36 months if publishing were halted.

It has been the policy of the Society to fund grant activity from the Research and Grants fund, transferring each year any necessary amount from the General Fund to cover any deficit created by increases in grant activity or special initiatives. At 31 December 2015 the sum required to be transferred to balance the Research and Grants Fund was £590,000.

A further explanation of the funds is provided in note 15 of the financial statements.

## **FINANCIAL REVIEW** (continued)

### **Grant Making Policy**

The RAS has for many years provided small grants to support the community in activities not funded by the research councils. Primarily these have been awarded to help students at the start of their careers, either with funding for summer bursaries enabling them to experience working in a research environment while still an undergraduate, or to enable PhD students to present work at research conferences. The RAS has also supported scientific meetings in the UK, especially those held outside London. These broad categories of support have been discussed many times at Council and serve the purpose of encouraging entrants to the profession and extending the activities of the Society to members and the public outside London.

In addition to these grants to individuals the Society funds a series of fellowships to promote the careers of the highest quality young postdoctoral scientists. These currently include RAS Fellowships (on any subject) the Norman Lockyer Fellowship (in Solar and Solar Terrestrial Physics) and Daphne Jackson Fellowships enabling scientists to return to work after career breaks. Of these fellowships the Norman Lockyer Fellow is funded from a restricted fund set up for that purpose.

A further activity funded by the Society is the award of medals to recognise the highest quality work in various categories. These awards are proposed to Council by a separate awards panel and no awards are made to serving councillors.

The grants, fellowships and awards are funded from two sources. The Society has a restricted fund invested with Newton Investment Management and the income from this fund is used to support the grants expenditure in accordance with the bequests. Over the past decade the need for grant support has increased substantially and now exceeds the income from restricted funds. These are therefore supplemented by transfers from the unrestricted funds to meet the need, the movement of funds being recorded in accordance with the current SORP.

The grants panel deliberates twice a year. It comprises the Treasurer (Chair) and the three secretaries. About 160 applications are received for the two deadlines in February and in August. Panel members observe strict rules on conflict of interest, taking no part in decisions on grant applications from their home institutions. In addition it is usual for panel members to absent themselves from discussions on grant applications from scientists with whom they have had recent close contact, such as research students supervised in the past five years.

## **FINANCIAL REVIEW** (continued)

### **Key Management Personnel**

The key management personnel of the charity in charge of directing and controlling, running and operating the charity are the Trustees, the Executive Director and the Deputy Executive Director; the latter two are employees. They are assisted by a senior accountant, accountant, a further three managerial level officers and 12 other staff.

On behalf of the RAS Council the Treasurer carries out a salary comparison exercise every 3-5 years. The comparability study compares the staff salaries to other similar external positions to reassure the Trustees that the levels of remuneration are appropriate. The last comparison exercise was carried out in 2013.

In 2013 the analysis included consideration of the job function, complexity and location. For the majority of posts the current salary was well aligned with those of similar posts based in London. The salaries of the key management staff members were compared with those of similar appointees in other Learned Societies, consideration given to the size of the organisation (financial turnover) and the number of staff employed and salary levels set to ensure that the remuneration was appropriate for the level of managerial responsibility held.

The Society does not have a performance awarded pay scheme. The Trustees annually consider a salary increase in regards to cost of living that applies to all staff.

### **Pension scheme**

The Society's defined benefit pension surplus and its accounting treatment is explained in note 19 of these financial statements.

### **Legacies and donations**

The Society encourages Fellows to include donations to the Society in their wills and receives sporadic donations during the year from Fellows and members of the public. During the year the Society received donations of £4,845 (2014 - £17,014) and legacies of £21,969 (2014 -£nil).

### **Heritage assets**

The Society's collection of rare books, fine art, telescopes and clocks was valued in 2011 at approximately £9.5 million. A detailed review and reconciliation of the heritage asset register was carried out in the year resulting in net disposals of £148,870. The RAS does not regard these as assets which can be converted to their cash value except in the most dire circumstances.

## **FINANCIAL REVIEW** (continued)

### **Investment Policy**

The Society has made no changes to its investment policy, with the funds now invested with BNY Mellon in a Growth and Income Fund managed by Newton Investment Management. The Society's Investment Policy has been agreed by Council and is published on the Society's website and the key elements are:

- ◆ Funds will be invested in stable, legally constituted bodies chosen to maximise the Society's investment income in the medium and long term.
- ◆ No investment will be made in any financial concern whose activities in practice threaten the charitable purposes of the Society, namely the encouragement of Astronomy, Geophysics and related subjects.
- ◆ No investment shall be made in a financial concern if there is evidence that it would be disapproved of by a majority of RAS members.

### **Investment Performance**

The Newton Growth and Income fund for charities provided income of 3% and net gains of 1.8% in the year.

## **TRUSTEES' RESPONSIBILITIES IN THE PREPARATION OF ACCOUNTS**

The trustees are responsible for preparing the Trustees' report and the accounts in accordance with applicable law and United Kingdom Accounting Standards (United Kingdom Generally Accepted Accounting Practice).

The law applicable to charities in England and Wales requires the trustees to prepare accounts for each financial year which give a true and fair view of the state of affairs of the charity and of the income and expenditure of the charity for that period. In preparing these accounts, the trustees are required to:

- ◆ select suitable accounting policies and then apply them consistently;
- ◆ observe the methods and principles in the Charities SORP;
- ◆ make judgments and estimates that are reasonable and prudent;
- ◆ state whether applicable United Kingdom Accounting Standards have been followed, subject to any material departures disclosed and explained in the accounts;
- ◆ prepare the accounts on the going concern basis unless it is inappropriate to presume that the charity will continue in operation.



**TRUSTEES' RESPONSIBILITIES IN THE PREPARATION OF ACCOUNTS**

(continued)

The trustees are responsible for keeping proper accounting records that disclose with reasonable accuracy at any time the financial position of the charity and enable them to ensure that the accounts comply with the Charities Act 2011 and the provisions of the Royal Charter and Bye Laws. They are also responsible for safeguarding the assets of the charity and hence for taking reasonable steps for the prevention and detection of fraud and other irregularities. The trustees are responsible for the maintenance and integrity of the charity and financial information included on the charity's website.

The Council of the Society believes that it has carried out these requirements.

**AUDITORS**

A resolution to appoint Buzzacott for 2016 will be proposed at the Annual General Meeting.

Approved by the Council and signed on its behalf by:

Professor Martin Barstow  
President

Date: 13/05/16

**Independent auditor's report to the trustees of the Royal Astronomical Society**

We have audited the accounts of the Royal Astronomical Society for the year ended 31 December 2015, which comprise the statement of financial activities, the balance sheet, the statement of cash flows, the principal accounting policies and the related notes. The financial reporting framework that has been applied in their preparation is applicable law and United Kingdom Accounting Standards (United Kingdom Generally Accepted Accounting Practice), including FRS 102, the Financial Reporting Standard applicable in the United Kingdom and Republic of Ireland.

This report is made solely to the trustees, as a body, in accordance with Section 144 of the Charities Act 2011 and with regulations made under Section 154 of that Act. Our audit work has been undertaken so that we might state to the trustees those matters we are required to state to them in an auditor's report and for no other purpose. To the fullest extent permitted by law, we do not accept or assume responsibility to anyone other than the charity and the trustees as a body, for our audit work, for this report, or for the opinions we have formed.

**Respective responsibilities of trustees and auditor**

As explained more fully in the Trustees' responsibilities statement set out in the Trustees' report, the trustees are responsible for the preparation of accounts which give a true and fair view.

We have been appointed as auditor under section 144 of the Charities Act 2011 and report in accordance with regulations made under section 154 of that Act. Our responsibility is to audit and express an opinion on the accounts in accordance with applicable law and International Standards on Auditing (UK and Ireland). Those standards require us to comply with the Auditing Practices Board's (APB's) Ethical Standards for Auditors.

**Scope of the audit of the accounts**

An audit involves obtaining evidence about the amounts and disclosures in the accounts sufficient to give reasonable assurance that the accounts are free from material misstatement, whether caused by fraud or error. This includes an assessment of: whether the accounting policies are appropriate to the charity's circumstances and have been consistently applied and adequately disclosed; the reasonableness of significant accounting estimates made by the trustees; and the overall presentation of the accounts. In addition, we read all the financial and non-financial information in the Trustees' report to identify material inconsistencies with the audited accounts and to identify any information that is apparently materially incorrect based on, or materially inconsistent with, the knowledge acquired by us in the course of performing the audit. If we become aware of any apparent material misstatements or inconsistencies we consider the implications for our report.

## Independent auditor's report 31 December 2015

### Opinion on the accounts

In our opinion the accounts:

- ◆ give a true and fair view of the state of the charity's affairs as at 31 December 2015 and of its income and expenditure for the year then ended;
- ◆ have been properly prepared in accordance with United Kingdom Generally Accepted Accounting Practice; and
- ◆ have been prepared in accordance with the requirements of the Charities Act 2011.

### Matters on which we are required to report by exception

We have nothing to report in respect of the following matters where the Charities Act 2011 requires us to report to you if, in our opinion:

- ◆ the information given in the Trustees' report is inconsistent in any material respect with the accounts; or
- ◆ sufficient accounting records have not been kept; or
- ◆ the accounts are not in agreement with the accounting records and returns; or
- ◆ we have not received all the information and explanations we require for our audit.



Buzzacott LLP  
Statutory Auditor  
130 Wood Street  
London  
EC2V 6DL

26/5/16

Buzzacott LLP is eligible to act as an auditor in terms of section 1212 of the Companies Act 2006

## Statement of financial activities Year to 31 December 2015

	Notes	Unrestricted funds £	Restricted funds £	2015 Total funds £	Restated 2014 Total funds £
<b>Income</b>					
Donations and legacies	1	25,655	1,159	<b>26,814</b>	17,014
Other trading activities		53,478	—	<b>53,478</b>	35,570
Investment income	2	142,407	57,711	<b>200,118</b>	208,571
Charitable activities	3	3,859,398	—	<b>3,859,398</b>	4,244,013
<b>Total income</b>		<b>4,080,938</b>	<b>58,870</b>	<b>4,139,808</b>	<b>4,505,168</b>
<b>Expenditure</b>					
Raising funds		16,336	—	<b>16,336</b>	12,367
Charitable activities	5	4,083,469	316,402	<b>4,399,871</b>	3,723,377
<b>Total expenditure</b>		<b>4,099,805</b>	<b>316,402</b>	<b>4,416,207</b>	<b>3,735,744</b>
<b>Net (expenditure) income before investment gains and losses</b>		<b>(18,867)</b>	<b>(257,532)</b>	<b>(276,399)</b>	<b>769,424</b>
Net gains on investments	12	80,898	32,773	<b>113,671</b>	316,150
<b>Net (expenditure) income</b>		<b>62,031</b>	<b>(224,759)</b>	<b>(162,728)</b>	<b>1,085,574</b>
<b>Transfers between funds</b>	15	<b>(590,000)</b>	<b>590,000</b>	<b>—</b>	<b>—</b>
<b>Other recognised gains and losses</b>					
Pension surplus not recognised	19	—	—	<b>—</b>	<b>(78,000)</b>
<b>Net movement in funds</b>		<b>(527,969)</b>	<b>365,241</b>	<b>(162,728)</b>	<b>1,007,574</b>
<b>Reconciliation of funds:</b>					
Total funds brought forward at 1 January 2015		17,155,475	2,147,559	<b>19,303,034</b>	18,295,460
Total funds carried forward at 31 December 2015		16,627,506	2,512,800	<b>19,140,306</b>	19,303,034

All gains and losses for the year are recognised in the above statement. Activities are classed as continuing.

The notes on pages 44 to 57 form part of these accounts.

## Balance sheet 31 December 2015

	Notes	2015 £	2015 £	2014 £	2014 £
<b>Fixed assets</b>					
Tangible assets					
. Heritage assets	11	9,440,879		9,589,749	
. Other assets	11	1,226,035		1,264,997	
Investments	12	6,368,502		6,254,831	
			17,035,416		17,109,577
<b>Current assets</b>					
Debtors					
Cash at bank and in hand	13	643,027		667,371	
		3,464,777		3,237,332	
		4,107,804		3,904,703	
<b>Creditors: amounts falling due within one year</b>	14	(1,829,574)		(1,643,246)	
<b>Net current assets</b>			2,278,230		2,261,457
<b>Total assets less current liabilities</b>					
			19,313,646		19,371,034
<b>Creditors: amounts falling due after one year</b>					
	14		(173,340)		(68,000)
<b>Total net assets</b>			19,140,306		19,303,034
<b>The funds of the charity</b>					
Unrestricted income funds					
. Designated funds	16	12,444,367		11,854,206	
. General funds		4,183,139		5,301,269	
Restricted income funds	15	2,512,800		2,147,559	
		19,140,306		19,303,034	

The accounts were approved by Council on 13 May 2016 and signed on its behalf by

Professor Martin Barstow  
President

Approved on: 13/05/16

The notes on pages 44 to 57 form part of these accounts

## Statement of cash flows Year to 31 December 2015

	Notes	2015 £	2014 £
<b>Cash inflow from operating activities</b>			
Net cash provided by operating activities	A	100,973	3,156
<b>Cash inflow from investing activities</b>			
Dividends and interest from investments		200,118	208,571
Purchase of tangible fixed assets		(73,646)	(14,109)
<b>Net cash provided by investing activities</b>		<b>126,472</b>	<b>194,462</b>
<b>Change in cash and cash equivalents in the year</b>		<b>227,445</b>	<b>197,618</b>
<b>Cash and cash equivalents at 1 January 2015</b>	B	<b>3,237,332</b>	<b>3,039,714</b>
<b>Cash and cash equivalents at 31 December 2015</b>	B	<b>3,464,777</b>	<b>3,237,332</b>

Notes to the cash flow statement for the year to 31 December 2015.

### A Reconciliation of net movement in funds to net cash flow from operating activities

	2015 £	2014 £
<b>Net movement in funds (as per the statement of financial activities)</b>	<b>(162,728)</b>	1,007,574
<b>Adjustments for:</b>		
Depreciation charge	112,608	113,820
Net gains on investments	(113,671)	(316,150)
Dividends and interest from investments	(200,118)	(208,571)
Loss on disposal of heritage assets	148,870	—
Pension surplus not recognised	—	78,000
Decrease (increase) in debtors	24,344	(494,436)
Increase (decrease) in creditors	291,668	(177,081)
<b>Net cash provided by operating activities</b>	<b>100,973</b>	<b>3,156</b>

### B Analysis of cash and cash equivalents

	2015 £	2014 £
Cash at bank and in hand	3,464,777	3,237,332
<b>Total cash and cash equivalents</b>	<b>3,464,777</b>	<b>3,237,332</b>

## Principal accounting policies 31 December 2015

The principal accounting policies adopted, judgements and key sources of estimation uncertainty in the preparation of the accounts are laid out below.

### Basis of preparation

These accounts have been prepared for the year to 31 December 2015.

The accounts have been prepared under the historical cost convention with items recognised at cost or transaction value unless otherwise stated in the relevant accounting policies below or the notes to these accounts.

The accounts have been prepared in accordance with Accounting and Reporting by Charities: Statement of Recommended Practice applicable to charities preparing their accounts in accordance with the Financial Reporting Standard applicable in the United Kingdom and Republic of Ireland (FRS 102) (Charities SORP FRS 102) issued on 16 July 2014, the Financial Reporting Standard applicable in the UK and Republic of Ireland (FRS 102) and the Charities Act 2011.

The charity constitutes a public benefit entity as defined by FRS 102.

The accounts are presented in sterling and are rounded to the nearest pound.

### Reconciliation with previous Generally Accepted Accounting Practice

In preparing the accounts, the trustees have considered whether in applying the accounting policies required by FRS 102 and the Charities SORP FRS 102 a restatement of comparative items was needed. The following restatements were required.

In accordance with the requirements of FRS 102 a reconciliation of the net income for the year is provided with the net income under previous GAAP adjusted for the presentation of investment gains as a component of reported income:

	2014 £
Reconciliation of reported income:	
Net income as previously stated	769,424
Adjustment for gains on investments now treated as a component of net income	316,150
2014 net income as restated	<u>1,085,574</u>

As per note 6, governance costs are included in support costs and restated for 2014.

No restatement of the opening balances as at 1 January 2014 or 1 January 2015 was required.

## Principal accounting policies 31 December 2015

### **Critical accounting estimates and areas of judgement**

Preparation of the accounts requires the trustees and management to make significant judgements and estimates.

The items in the accounts where these judgements and estimates have been made include:

- ◆ estimating the liability for multi-year grant commitments;
- ◆ estimating the useful economic life of tangible fixed assets; and
- ◆ estimating the accrual for Burlington House rent.

### **Assessment of going concern**

The trustees have assessed whether the use of the going concern assumption is appropriate in preparing these accounts. The trustees have made this assessment in respect to a period of one year from the date of approval of these accounts.

The Trustees are fully cognisant of the risks that the Society is carrying such as the uncertainty and risks of increased rental charges for the accommodation in Burlington House, the possible risk posed by Open Access and a possible impact on the business model that relies on the publishing income and also of a low probability, albeit high impact risk, that the quality and success of the Societies publications will decrease.

Whilst recognising these risks the trustees are content that the Society has strategies in place to manage them and are of the opinion that the Society has adequate free reserves and therefore sufficient resources to meet its liabilities as they fall due. The Reserves Policy on page 27 of the Trustees' report provides more detail.

The Trustees have concluded that there are no other material uncertainties related to events or conditions that may cast significant doubt on the ability of the charity to continue as a going concern.

The most significant areas of judgement that affect items in the accounts are mentioned above and detail provided in the section on risks in the Trustees' report.

With regard to the next accounting period, the year ending 31 December 2016, the most significant areas that affect the carrying value of the assets held by the charity are expected to be the same as for 2015.



## Principal accounting policies 31 December 2015

### **Income recognition**

Income is recognised in the period in which the charity has entitlement to the income, the amount of income can be measured reliably and it is probable that the income will be received.

Income comprises donations, investment income, income from the sale of publications, membership subscriptions, and other related income.

Donations, are recognised when the charity has confirmation of both the amount and settlement date. In the event of donations pledged but not received, the amount is accrued for where the receipt is considered probable. In the event that a donation is subject to conditions that require a level of performance before the charity is entitled to the funds, the income is deferred and not recognised until either those conditions are fully met, or the fulfilment of those conditions is wholly within the control of the charity and it is probable that those conditions will be fulfilled in the reporting period.

Legacies are included in the statement of financial activities when the charity is entitled to the legacy, the executors have established that there are sufficient surplus assets in the estate to pay the legacy, and any conditions attached to the legacy are within the control of the charity.

The Society has a contract with Oxford University Press for the publication of journals, which gives a percentage of the surplus made to 31 December each year to the Society. Although payments are received net, income is recognised in the accounts on a gross basis which reflects that the Society retains the underlying long term rights. All publication income is accounted for on a receivable basis.

Income from membership subscriptions are payable in respect of a twelve month period in advance. The unearned portion of income received relating to the period after 31 December is carried forward as deferred income.

Investment income is recognised once the dividend has been declared and notification has been received of the dividend due.

Interest on funds held on deposit is included when receivable and the amount can be measured reliably by the charity; this is normally upon notification of the interest paid or payable by the bank.

### **Expenditure recognition**

Liabilities are recognised as resources expended as soon as there is a legal or constructive obligation committing the charity to the expenditure. All expenditure is accounted for on an accruals basis and has been classified under headings that aggregate all costs related to the category.

Expenditure on charitable activities includes all costs associated with furthering the charitable purposes of the charity as described in the Trustees' Report.

**Expenditure recognition** (continued)

Grants payable for the support of research or study in any areas of astronomy and geophysics are recognised in the accounts as soon as the obligation has been authorised by the Grants Committee, which meets twice-yearly (ca. February and August) to allocate funds, the recipient has a reasonable expectation that they will receive a grant and any condition attaching to the grant is outside the control of the Society.

The costs of raising funds consist of investment management fees and RAS diaries bought for resale.

**Allocation of support and governance costs**

Support costs, including governance costs, represent indirect charitable expenditure. In order to carry out the primary purposes of the charity it is necessary to provide support in the form of personnel development, financial procedures, provision of office services and equipment and a suitable working environment.

Governance costs comprise audit fees, legal advice for trustees and costs associated with constitutional and statutory requirements, e.g. cost of trustee meetings and preparing statutory accounts as well as costs associated with the strategic management of the Society

Support costs are apportioned based on the proportion of floor area occupied by, or proportion of staff time spent on, the activity.

**Taxation**

The Society is a registered charity and no liability to taxation arises on the results of its activities as applied for charitable purposes, with the exception of investment income, which is taxed at source.

**Operating leases**

Rentals under operating leases are charged to the statement of financial activities on a straight-line basis over the term of the lease.

**Pension costs**

The Society operates two pension schemes for employees. The assets of the schemes are held separately from those of the Society.

The Society operates a defined benefit pension scheme for employees, who joined its service before 1 January 2002, providing benefits based upon final pensionable earnings. Royal London manages the pension scheme, with the investments now 100% held by Royal London.

## Principal accounting policies 31 December 2015

### **Pension costs** (continued)

The latest actuarial valuation at 31 December 2015 shows a pension surplus which is not recognised on the balance sheet as an asset because it is not available to the Society by way of reduced future contributions.

Actuarial gains and losses arising from new valuations and from updating valuations to the balance sheet date are recognised in the statement of financial activities as other recognised gains and losses.

The Society has established a second pension scheme (a defined contribution scheme) for employees who began service with the Society after 1 January 2002. The amount charged in the statement of financial activities in respect of the defined contribution pension scheme is the contributions payable in the year.

### **Foreign currencies**

Monetary assets and liabilities denominated in foreign currencies are translated at the rate of exchange ruling at the balance sheet date. Transactions in foreign currencies are recorded at the rate ruling at the date of the transaction. All differences are taken to the statement of financial activities.

### **Heritage assets**

Heritage assets are included in the accounts at a historic valuation which is being treated as deemed cost.

There are two main classes of heritage assets that the Society possesses, which are:

- ◆ Rare Books and Manuscripts
- ◆ Fine Art and Collectibles – Historic books, portraits, busts, instruments and antique furniture.

The Society's rare book and manuscript collection is reported in the balance sheet at the latest valuation by Christies in 1996, with a number of items re-valued by Quaritch in 2011. The valuation basis was High Auction Estimate.

The Society's fine art and collectibles are reported in the balance sheet at the latest valuation by Bonhams in 1992, including index linking, with a number of items revalued by Bonhams in 2011.

The rare book collection is preserved by storing in an air-conditioned, temperature-controlled environment; the fine art and collectibles are also continually preserved in order to maintain their values.

## Principal accounting policies 31 December 2015

### **Heritage assets** (continued)

The majority of heritage assets have been acquired by donation. In the early days, the Society purchased some rare books and manuscripts using a fund established for this purpose.

Certain heritage assets are on public display at exhibitions. The Society's Librarian controls access to those heritage assets which are kept at Burlington House.

Depreciation is not charged on heritage assets due to immateriality based on their extremely long useful lives and high residual values.

### **Other tangible fixed assets**

The Society capitalises tangible fixed assets with a cost greater than £250 and an estimated useful life over one year.

Tangible fixed assets are depreciated on cost on a straight line basis from the date of acquisition over their expected useful lives as follows:

◆ Telephone and security system and computer equipment	4 years
◆ Leasehold Improvements	20 years
◆ Plant and machinery	10 years

### **Investments**

Investments are valued at their market value ruling at the balance sheet date. Unrealised gains and losses, are included in the statement of financial activities. Gains and losses on the revaluation and disposal of investment assets are separately identified in the statement of financial activities.

### **Debtors**

Debtors are recognised at their settlement amount, less any provision for non-recoverability. Prepayments are valued at the amount prepaid. They have been discounted to the present value of the future cash receipt where such discounting is material.

### **Cash at bank and in hand**

Cash at bank and in hand represents such accounts and instruments that are available on demand or have a maturity of less than three months from the date of acquisition. Deposits for more than three months but less than one year have been disclosed as short term deposits. Cash placed on deposit for more than one year is disclosed as a fixed asset investment.

## Principal accounting policies 31 December 2015

### **Creditors and provisions**

Creditors and provisions are recognised when there is an obligation at the balance sheet date as a result of a past event, it is probable that a transfer of economic benefit will be required in settlement, and the amount of the settlement can be estimated reliably. Creditors and provisions are recognised at the amount the charity anticipates it will pay to settle the debt. They have been discounted to the present value of the future cash payment where such discounting is material.

### **Fund structure**

Restricted funds comprise monies raised for, or their use restricted to, a specific purpose, or contributions subject to donor imposed conditions

Designated funds represent monies set aside out of unrestricted funds and designated by the trustees for a specific purpose.

Unrestricted funds represent those monies which are freely available for application towards achieving any charitable purpose that falls within the Society's charitable objects.

### 1 Donations and legacies

	Unrestricted funds £	Restricted funds £	2015 Total funds £	2014 Total funds £
Donations	3,686	1,159	<b>4,845</b>	17,014
Legacies	21,969	—	<b>21,969</b>	—
<b>2015 Total funds</b>	<b>25,655</b>	<b>1,159</b>	<b>26,814</b>	<b>17,014</b>
2014 Total funds	4,801	12,213	17,014	

### 2 Investments

	Unrestricted funds £	Restricted funds £	2015 Total funds £	2014 Total funds £
Income from listed investments	140,879	57,072	<b>197,951</b>	198,896
Bank interest	1,528	639	<b>2,167</b>	2,675
Defined benefit scheme net income	—	—	—	7,000
<b>2015 Total funds</b>	<b>142,407</b>	<b>57,711</b>	<b>200,118</b>	<b>208,571</b>
2014 Total funds	148,725	59,846	208,571	

### 3 Charitable activities

	Unrestricted funds £	Restricted funds £	2015 Total funds £	2014 Total funds £
Publications (note 4)	3,541,840	—	<b>3,541,840</b>	3,927,613
Membership	305,885	—	<b>305,885</b>	305,391
Scientific meetings	3,944	—	<b>3,944</b>	1,525
Public policy	349	—	<b>349</b>	454
Library	4,130	—	<b>4,130</b>	8,130
Educational	3,250	—	<b>3,250</b>	—
Other	—	—	—	900
<b>2015 Total funds</b>	<b>3,859,398</b>	<b>—</b>	<b>3,859,398</b>	<b>4,244,013</b>
2014 Total funds	4,244,013	—	4,244,013	

**4 Publications**

	2015 £	2014 As restated £
<b>Income</b>		
Monthly notices of the Royal Astronomical Society	<b>2,532,900</b>	2,900,826
Geophysical Journal International	<b>924,925</b>	947,023
Astronomy & Geophysics	<b>76,110</b>	76,107
Other	<b>7,905</b>	3,657
	<b>3,541,840</b>	3,927,613
<b>Expenditure</b>		
Monthly notices of the Royal Astronomical Society	<b>1,910,610</b>	2,004,407
Geophysical Journal International	<b>570,818</b>	607,927
Astronomy & Geophysics	<b>112,396</b>	126,994
Other	<b>11,411</b>	10,353
	<b>2,605,235</b>	2,749,681

**5 Charitable activities**

Breakdown of costs of charitable activities:

	Direct costs £	Support costs £	2015 £	Direct costs as restated £	Support costs as restated £	2014 as restated £
Publications (note 4)	2,255,133	350,102	<b>2,605,235</b>	2,465,110	284,571	2,749,681
Scientific meetings	87,674	146,585	<b>234,259</b>	57,142	140,637	197,779
Membership	7,865	33,073	<b>40,938</b>	—	28,211	28,211
Educational	663,448	36,575	<b>700,023</b>	312,966	45,157	358,123
RAS 200	260,969	10,000	<b>270,969</b>	—	—	—
Library	226,580	243,177	<b>469,757</b>	55,507	255,499	311,006
Public policy	34,527	44,163	<b>78,690</b>	26,473	52,104	78,577
	3,536,196	863,675	<b>4,399,871</b>	2,917,198	806,179	3,723,377

Grants and awards, in support of research, are principally included under Educational above to reflect the responsibilities for the management and administration of grants. 174 grants of £848,569 (2014: £278,084) were made to institutes and 26 grants of £16,767 (2014: £27,556) were made to individuals.

Total grant making support costs were £20,000 (2014: £17,000).

Library direct costs include £148,870 relating to the movements in the book value of heritage assets following a detailed review of the heritage asset register.

A full list of all grantees and analysis can be found on the Society website [www.ras.org.uk](http://www.ras.org.uk)

## 6 Support costs

	2015	2014
	£	As restated £
Support costs analysed by function are as follows:		
Executive	100,087	123,146
Finance	82,720	66,331
Facilities	76,505	83,427
Membership	20,000	23,837
IT	53,647	45,426
Policy development and Press	68,723	80,163
Burlington House	104,771	108,012
Other	235,097	183,980
Governance (note 7)	122,125	91,857
	<b>863,675</b>	<b>806,179</b>

Staff time (based on a review of staff time apportionment) and floor area, are used as bases of apportioning support costs over charitable activities.

## 7 Governance costs

	2015	2014
	£	As restated £
Auditor's remuneration (note 8)	20,500	32,750
Legal & Professional	—	2,719
Trustees' expenses	30,834	18,921
Trustees' remuneration	5,307	5,190
AGM expenses	6,411	4,657
Committee expenses	5,347	2,318
Staff time	39,348	22,791
Other expenses	14,378	2,511
	<b>122,125</b>	<b>91,857</b>

## 8 Net (expenditure) income

This is stated after charging:

	2015	2014
	Total funds £	Total funds £
Depreciation	112,608	113,820
Auditor's remuneration:		
. Charity audit – current year	15,000	15,000
. Charity audit – prior year	(1,400)	9,500
. Pension scheme audit – current year	4,000	6,000
. Pension scheme audit – prior year	(600)	2,250
- Other Services – taxation advice	3,000	-
Operating lease rentals		
. Office equipment	37,828	6,720



**9 Staff costs and remuneration of key management personnel**

	2015 £	2014 £
Wages and salaries	652,938	610,881
Social security costs	66,648	56,626
Other pension costs (see note 19)		
. Stakeholder pension scheme	28,346	26,133
. Death in service contributions	1,189	1,670
. Defined benefit scheme – current service cost	—	7,000
	749,121	702,310

During the year one employee of the Society earned between £70,000 and £80,000 (2014 - one). No other employee of the Society earned over £60,000 in 2014 or 2015. Employer contributions to the stakeholder pension scheme for this employee were £nil (2014 – £nil).

The average number of employees was 18 (Administration 4, Outreach 1, Editorial 9, Library 1, House 2, Press & Policy 1) (2014 – 16).

The key management personnel of the charity in charge of directing and controlling, running and operating the charity on a day to day basis comprise the Trustees, the Executive and Deputy Executive Director. The total remuneration (including taxable benefits and employer's pension contributions) of the key management personnel for the year was £136,543 (2014 - £134,391).

**10 Transactions with Trustees**

The Trustees receive reimbursement for travel expenses actually incurred in attending meetings. The amount reimbursed during the year for 22 Trustees was £36,354 (2014 - £18,921).

Remuneration of £11,307 was paid to two Trustees during 2015 (2014: £5,190).

By agreement with the Charity Commissioners (dated 14 June 2004, case No 299189, Sealing No 344/04) the Treasurer is paid an Honorarium of £5,300 per year, uplifted by inflation at the RPI rate and formally approved each year by Council.

The National Astronomy Meeting (NAM) was held in Llandudno in 2015, not at a venue hosted by a university. There was therefore no local manager available to oversee the preparation and running of the meeting. To fill this void a Trustee Dr Mandy Bailey was asked to take the post of NAM Manager, a task completely outwith her duties as a trustee. Dr Bailey was well qualified for this task having attended several NAM's and significant international meetings such as the IAU in Beijing. She was paid an honorarium of £6,000 compliant with the formal conditions contained in our agreement with the Charity Commission.

A Trustee made a donation of £800 to the library fund to facilitate the restoration of some of our rare books.

**10 Transactions with Trustees (continued)**

***Grants Made to Councillors***

The following grants were made to Councillors during the year as part of the RAS grant awarding process. The recipients had no influence or part in the decisions on the award of these grants. For the most part the grant holders were not the main personal beneficiaries as the support was directly received by their students of meeting attendees. Excluding Councillors from the grants round completely is not seen as a satisfactory policy. It would strongly dissuade members from standing for election as Councillors and would be at variance with the accepted practice in Research Councils where members of grants panels are not excluded from applying. The process of grant review and award fully complies with the Nolan Principles and closely follows Government Research Council practice.

The grants were:

- Summer bursary, Supervised By Dr Stephen Serjeant (OU) Councillor £1,200
- Support for MUAN Meeting at Lancaster to Prof Jim Wild (Lancaster) Councillor £2,000
- Travel support for Dr Helen Fraser (OU) Councillor £1000
- Long term student visit awarded to Prof Martin Bureau (Oxford) Councillor £1,500
- Summer Bursary supervised by Prof Lyndsay Fletcher (Glasgow) Secretary £1,200
- Travel grant to attend LPSC at Houston for Ms Jane McArthur (Leicester) Councillor £860
- Creativity and Curiosity art and science project, awarded to Prof M Barstow (Leicester) President £2,000
- Norman Memorial Trust as disclosed in note 21 (which shares the same board of Trustees as the Society)
- Paneth Meteorite Collection as disclosed in note 21 (Professor A.M Cruise is a Trustee)

**11 Tangible fixed assets**

**a) *Heritage assets***

	Rare books and manuscripts £	Fine art and collectibles £	Total £
At 1 January 2015	5,051,500	4,538,249	<b>9,589,749</b>
Net disposals	(100,000)	(48,870)	<b>(148,870)</b>
At 31 December 2015	4,951,500	4,489,379	<b>9,440,879</b>

## Notes to the accounts 31 December 2015

### 11 Tangible fixed assets (continued)

#### a) *Heritage assets (continued)*

The net disposals arise following a detailed review and reconciliation of the heritage asset register during the year.

There have been no movements in heritage assets in the preceding four years.

#### b) *Other assets*

	Leasehold improve- ments £	Plant and machinery £	Telephone, security & computer equipment £	Past Presidents' Portraits £	Total £
<b>Cost</b>					
At 1 January 2015	1,847,358	—	283,168	9,466	<b>2,139,992</b>
Additions	29,907	22,754	20,985	—	<b>73,646</b>
Disposals	—	—	(73,560)	—	<b>(73,560)</b>
At 31 December 2015	<b>1,877,265</b>	<b>22,754</b>	<b>230,593</b>	<b>9,466</b>	<b>2,140,078</b>
<b>Depreciation</b>					
At 1 January 2015	637,440	—	237,555	—	<b>874,995</b>
Disposals	—	—	(73,560)	—	<b>(73,560)</b>
Charge for the year	93,160	758	18,690	—	<b>112,608</b>
At 31 December 2015	<b>730,600</b>	<b>758</b>	<b>182,685</b>	<b>—</b>	<b>914,043</b>
<b>Net book values</b>					
At 31 December 2015	<b>1,146,665</b>	<b>21,996</b>	<b>47,908</b>	<b>9,466</b>	<b>1,226,035</b>
At 31 December 2014	1,209,918	—	45,613	9,466	1,264,997

### 12 Investments

	General funds £	Restricted funds £	2015 Total funds £	2014 Total funds £
Market value at 1 January 2015	4,393,678	1,861,153	<b>6,254,831</b>	5,938,681
Net unrealised investment gains	80,898	32,773	<b>113,671</b>	316,150
<b>Market value at 31 December 2015</b>	<b>4,474,576</b>	<b>1,893,926</b>	<b>6,368,502</b>	6,254,831
<b>Historical cost as at 31 December 2015</b>	<b>3,466,529</b>	<b>1,450,552</b>	<b>4,917,081</b>	4,917,081

Investments comprise BNY Mellon: Global Growth and Income Fund.

### 13 Debtors

	2015 £	2014 £
Trade debtors	<b>15,612</b>	48,867
Prepayments and accrued income	<b>602,132</b>	615,464
Other debtors	<b>25,283</b>	3,040
	<b>643,027</b>	667,371

## 14 Creditors

### a) Amounts falling due within one year

	2015 £	2014 £
Trade creditors	53,750	96,602
Accruals	98,714	87,798
Grants payable	523,425	238,576
Tax and social security	196,140	175,316
Deferred income	930,009	1,020,223
Other creditors	27,536	24,731
	<b>1,829,574</b>	<b>1,643,246</b>

### b) Amounts falling due after more than one year

	2015 £	2014 £
Grants payable	173,340	68,000

### c) Deferred income

	2015 £	2014 £
Balance as at 1 January 2015	1,020,223	1,063,360
Released to income	(1,020,223)	(1,063,360)
Income received from Fellows in advance	30,009	45,223
National Astronomy Meeting income received in advance	—	25,000
Publications income received in advance	900,000	950,000
Balance as at 31 December 2015	<b>930,009</b>	<b>1,020,223</b>

## 15 Restricted funds

	1 January 2015 £	Income £	Expenditure £	Transfers and unrealised gains £	31 December 2015 £
Research & Grants fund	1,805,514	48,484	(300,461)	617,533	2,171,070
Benevolent fund	80,473	2,163	—	1,228	83,864
Library fund	59,103	2,388	(5,190)	902	57,203
Education fund	79,470	2,485	(7,000)	1,207	76,162
Lectures & Awards fund	122,999	3,350	(3,751)	1,903	124,501
Grand total	<b>2,147,559</b>	<b>58,870</b>	<b>(316,402)</b>	<b>622,773</b>	<b>2,512,800</b>

The transfer from unrestricted funds to restricted funds of £590,000 represents the amount required to meet deficits on the General fund within the Research and Grants fund.

**15 Restricted funds (continued)**

The Restricted Funds are consolidated into five groups, to serve the Council's priorities, and address modern needs; Research & Grants, Benevolent, Library, Education and Lectures & Awards.

The purpose of the funds is unchanged from the purposes stated on the Society's website:

[http://www.ras.org.uk/index.php?option=com\\_content&task=view&id=260&Itemid=27](http://www.ras.org.uk/index.php?option=com_content&task=view&id=260&Itemid=27)

**Research & Grants fund**

AG Stillhamer Trust Fund (1937)  
 EW Brown Trust Fund (1939)  
 Plummer Bequest (1946)  
 Victor Nadarov Fund (1950)  
 Sir Norman Lockyer Memorial Trust (1990)  
 Hosie Bequest (2000)  
 Mrs. J.M. Jelley-Freeman Bequest (2000)  
 CAG Bearpark Trust (2000)  
 Patricia Tomkins Fund (2011)  
 Special Purposes Fund  
 General

**Benevolent fund**

Lee & Jansen Trust Fund (1834/1879)  
 Gerald Merton Fund (1986)  
 Donald R. Barber Fund (2001)

**Library fund**

Turnor Fund and Horrocks Memorial Fund (1853/1876)  
 Harry Watson Memorial Fund (1923)  
 Warin Bushell Fund (1964)  
 Gaythorp Bequest (1969)  
 Ian Ridpath Conservation Fund (2006)  
 Dewhurst Fund (2013)

**Education fund**

Newbigen Fund (1990)  
 Michael Penston Memorial Fund (1991)  
 Sir William Hunter McCrea Memorial Fund (2000)  
 Paul Ruffle Memorial Fund (2014)  
 Education Committee

**Lectures & Awards fund**

Hannah Jackson-Gwilt Trust Fund (1861/1893)  
 George Darwin Lectureship Fund (1926)  
 George Darwin Support Fund  
 AS Eddington Commemoration Fund (1948)  
 Harold Jeffreys Lectureship Fund (1962)  
 Roger Tayler Memorial Fund (1998)  
 AT Price Medal Fund (1999)  
 Gerald Whitrow Memorial Lecture Fund (2001)  
 Fowler Prizes Fund (2004)

**16 Designated funds**

	Balance 1 January 2015 £	New designation £	Utilised / released £	Balance 31 December 2015 £
Burlington House fund	1,209,918	—	(93,159)	1,116,759
Heritage Asset fund	9,589,749		(148,870)	9,440,879
Building fund	654,539	93,159	—	747,698
Open Access fund	400,000	—	—	400,000
RAS 200	—	1,000,000	(260,969)	739,031
<b>Total designated funds</b>	<b>11,854,206</b>	<b>1,093,159</b>	<b>(502,998)</b>	<b>12,444,367</b>

**16 Designated funds (continued)**

***(i) Burlington House fund***

Under lease agreements signed in 2005 with the Department of Communities and Local Government (previously Office of the Deputy Prime Minister - ODPM), the Society and four others in the Burlington House courtyard secured future occupancy on the basis of paying rent and additionally, being responsible for the external fabric of the building, following a renovation programme, carried out by the ODPM in mid-2006. In 2006-7, the Society executed a refurbishment project on the interior of the apartments. Expenditure incurred on the project has been capitalised and designated as the Burlington House fund.

***(ii) Heritage Asset fund***

A fund has been established to include the Society's heritage assets to recognise that there is no intention to dispose of these assets and the amount is not readily available to meet expenditure.

***(iii) Building fund***

The repairs and maintenance of the exterior of the building, its insurance and some security costs are carried out by the landlord for all the occupants and a proportion recharged to the Society. The Building Fund should provide for internal and external maintenance of the building and provide for the possibility, at the end of lease, if necessary, to obtain a building for the Society's use. The Finance Committee will recommend how much more to accumulate in this fund and at what rate. The timescale for expenditure is difficult to forecast but in principle could start within five years.

***(iv) Open Access fund***

A fund has been established to provide against the risk of the possible collapse of the current business model for learned publishing due to various forms of open access. The timescale for expenditure is difficult to forecast but could in principle start within five years.

***(v) RAS 200***

The original fund balance of £1,000,000 matches the total approved grant expenditure for RAS200. RAS200 grant expenditure will be charged to this fund from 2015 to 2020.

### 17 Analysis of net assets between funds

	General funds £	Designated funds £	Restricted funds £	2015 Total funds £
Fund balances at 31 December 2015 are represented by:				
Tangible assets				
. Heritage assets	—	9,440,879	—	<b>9,440,879</b>
. Other fixed assets	109,276	1,116,759	—	<b>1,226,035</b>
Investments	4,474,576	—	1,893,926	<b>6,368,502</b>
Current assets				
. Debtors	643,027	—	—	<b>643,027</b>
. Cash at bank and in hand	780,258	1,886,729	797,790	<b>3,464,777</b>
Current liabilities	(1,706,065)	—	(123,509)	<b>(1,829,574)</b>
Non-current liabilities	(117,933)	—	(55,407)	<b>(173,340)</b>
<b>Total net assets</b>	<b>4,183,139</b>	<b>12,444,367</b>	<b>2,512,800</b>	<b>19,140,306</b>

The total unrealised gains as at 31 December 2015 constitutes movements on revaluation and are as follows:

	2015 £	2014 £
<b>Unrealised gains included above:</b>		
On investments	<b>1,451,421</b>	1,337,750
<b>Total unrealised gains at 31 December 2015</b>	<b>1,451,421</b>	1,337,750
<b>Reconciliation of movements in unrealised gains</b>		
Unrealised gains at 1 January 2015	<b>1,337,750</b>	1,021,600
Add: net gains arising on revaluation arising in the year	<b>113,671</b>	316,150
<b>Total unrealised gains at 31 December 2015</b>	<b>1,451,421</b>	1,337,750

### 18 Leasing commitments

At 31 December 2015, the charity had future minimum commitments in respect of non-cancellable operating leases as follows:

	2015 £	2014 £
Lease expiring within two to five years – office equipment	<b>37,828</b>	6,720

### 19 Pension schemes

A qualified actuary carried out a triennial review of the scheme as at 1 January 2013; the actuarial valuation showed that the market value of the Scheme's assets as at 1 January 2013 was £877,000, which represents 126% of the benefits that accrued to members after allowing for expected future increases in earnings. The actuary has calculated that no contributions are payable from 1 January 2014.

## Notes to the accounts 31 December 2015

### 19 Pension schemes (continued)

Pension costs comprise £28,346 (2014: £26,133) in respect of the defined contribution scheme and £1,189 (2014: £1,670) in respect of Death in Service contributions.

#### **Retirement benefits disclosure under FRS102**

The latest actuarial valuation, at 31 December 2015, shows a pension surplus to be recognised of £nil (2014: £nil). There is a surplus of £420,000 which cannot be recognised as this is not available to the Society by way of reduced future contributions.

The amounts recognised in the balance sheet are as follows:

	2015 £'000	2014 £'000
Present value of funded obligations	(301)	(301)
Fair value of scheme assets	721	707
Surplus not recognised	(420)	(406)
Surplus in scheme at end of the year and available to the Society	—	—

Changes in the present value of the defined benefit obligations are as follows:

	2015 £'000	2014 £'000
Opening defined benefit obligation	301	266
Service cost (net of employee contributions)	—	7
Interest cost	11	12
Re-measurement arising from changes in assumptions & experience	(11)	15
Actual Employee contributions	—	1
Closing defined benefit obligation	301	301

Changes in fair value of scheme assets are as follows:

	2015 £'000	2014 £'000
Opening scheme assets	707	662
Interest Income	25	30
Actual return on plan assets, excluding interest income	(11)	14
Employee contributions	—	1
Closing scheme assets	721	707

The amounts recognised in income and expenditure are as follows:

	2015 £'000	2014 £'000
Current service cost (net of employee contributions)	—	(7)
Interest on obligation	(11)	(12)
Expected return on scheme assets	—	29
Effect of surplus restriction	11	(10)
Total	—	—

The actual return on scheme assets was £14,000 (2014: £44,000).



19 Pension schemes (continued)

**Retirement benefits disclosure under FRS102 (continued)**

The amounts recognised in other recognised gains and losses are as follows:

	Current year		Cumulative	
	2015 £'000	2014 £'000	2015 £'000	2014 £'000
Actuarial losses	—	—	(176)	(176)

The major categories of scheme assets as a percentage (or value) of total scheme assets and the expected rate of returns are as follows (the assets are all invested in a policy of insurance):

	Fair value of scheme assets	
	2015 %	2014 %
Equities	44	38
Bonds	13	23
Property	26	11
Cash	15	13
Gilts	2	15
	<b>100</b>	<b>100</b>

Principal actuarial assumptions at the balance sheet date (expressed as a weighted average):

	2015 %	2014 %
Discount rate at 31 December	3.8	3.6
Future salary increases	2.4	2.3
Future pension increases – pension earned before 6 April 1997	0.0	0.0
Future pension increases – pension earned after 6 April 1997	3.3	3.2
Proportion of employees opting for early retirement	2.4	2.3
Inflation (RPI)	3.3	3.2

The current mortality rate assumptions include sufficient allowance for future improvements in mortality rates. The assumed life expectancy for a pensioner retiring at 65 on the balance sheet date is:

	2015	2014
Retiring now		
Male	21.9	22.0
Female	23.8	24.0
Retiring in 20 years		
Male	23.1	23.3
Female	25.3	25.5

**19 Pension schemes (continued)**

***Retirement benefits disclosure under FRS102 (continued)***

Amounts for the current and previous four periods are as follows:

Defined benefit pension scheme:

	2015 £'000	2014 £'000	2013 £'000	2012 £'000	2011 £'000
Defined benefit obligations	301	301	266	407	672
Scheme assets	721	707	662	848	761
Surplus	420	406	396	441	89
Experience adjustments on scheme assets – gain (loss)	(11)	15	83	211	(45)
Experience adjustments on scheme liabilities – gain (loss)	—	21	(123)	78	(34)

**20 Grants committed**

Grants to the value of £483,000 have been committed for future payment, subject to certain conditions, specified by the Society, having been met (2014: £96,000). These grants were not approved or communicated to the recipients until after the year end and therefore have not been accounted for in the year ended 31 December 2015.

**21 Connected Charities and related party transactions**

Since 2001, the Society has been the administration agent for the Trustees of FA Paneth Meteorite Collection, as a charity connected to the Royal Astronomical Society. The Paneth Trustees decided that its income should support research in Cosmochemistry, by graduate and postdoctoral students. The accumulated net expenditure of £24,463 (2014: £21,627), is included in Other Creditors.

The Society, together with The Royal Society, University of Bath, Bath Preservation Society and a representative of the Wm. Herschel Society, has been a Trustee of the Herschel House Museum since 1987.

A payment of £10,000 was paid to the Bath Preservation Society which has formally taken over the running of Herschel House in Bath from the previous group of Trustees including the RAS. The Trustees of the Herschel House Trust collectively agreed to hand over the property to the Bath Preservation Society and, to support the renovation and financial rehabilitation of Herschel House, contributed a one off payment.

**21 Connected Charities and related party transactions (continued)**

The Society also administers the Sir Norman Lockyer Memorial Trust, (charity registration number 900135). By agreement with the Charity Commission the Society includes the following information within these financial statements. Each charity remains a separate legal entity. The Norman Lockyer Fellowship is awarded to enable an outstanding researcher to devote the majority of their time to research on an astronomical topic, including solar system and planetary science. They are named after Sir Norman Lockyer (1836-1920), pioneering solar astronomer and discoverer of helium.

The fellowship is available every three years, with applications sought in the years 2013, 2016, 2019 etc. for fellowships starting in the following year.

The fellowship is open to those who hold a doctorate from a recognised institution of higher education at the time of taking up the award. Applicants must normally be 30 years of age or younger on 1 October of the year of appointment.

The Society funds Fellows between spine points 35 and 40 (inclusive) on the UCU HE Framework single pay spine. The Norman Lockyer Fellowship is currently funding a three year fellowship from 2014, totalling £159,968. The fund balance is £1,183,160 (2014 £1,277,846).

