



ASTRONOMICAL SOCIETY OF AUSTRALIA

Incorporated in the ACT

ABN 37 660 297 848

President's Report for 2015/2016

The University of Sydney, Wednesday 6th July 2016

1. Council members, 2015-2016

Virginia Kilborn	President
Duncan Galloway	Vice President
Andrew Hopkins	Immediate Past President
John O'Byrne	Secretary
Marc Duldig	Secretary
Ravi Sood	Treasurer
Cath Trott	Councilor
Lee Spitler	Councilor
Stuart Wyithe	Councilor
Naomi McClure-Griffith	Councilor
Chris Power	Councilor
Alex Codoreanu	Student Representative
Daniel Price	(Ex-officio) Chair, PASA Editorial Board
Tanya Hill	(Co-opted) Prizes and Awards co-ordinator
Michael Brown	(Co-opted) Media and Outreach co-ordinator

I would like to thank all council members for their contributions in the past year. Particular thanks go to council members holding ongoing roles in the society (John O'Byrne, Marc Duldig, Tanya Hill, Daniel Price and Michael Brown), and to the treasurer Ravi Sood.

2. Highlights

The year 2016 marks the 50th anniversary of the formation of the ASA. Over the past 50 years, the society has continually grown, with current membership standing at over 700. The development of the four ASA chapters (ANITA, EPOC, WiA/IDEA and ECR) has been one of the strongest aspects of the ASA in recent years – these chapters bring with them enthusiasm and support for different areas of the astronomical community.

The 2016 ASA ASM has been a very special event thus far, and has over 250 participants. The reception at the Sydney Observatory was a wonderful evening, with chief scientist Dr. Alan Finkel providing opening remarks, and the grand-daughter of Harley Wood, Samantha Wood giving a

personal perspective on her family's contributions to the observatory. The first session of the ASA on the history of the society, and astronomy in Australia as a whole, was a fitting start to the conference and provided a glimpse into the changes that have happened over the past 50 years in the astronomy landscape.

Reports from the HWSA were very positive – with more than 60 participants, it was a jam-packed weekend of lectures and social activities, with the overarching theme of *Seize the Day: Making the Most of your Opportunities*.

Prompted by suggestions that the ASA logo needed to be updated, the ASA council ran a “design a logo” competition, which received over 50 entries. The winning entry will be revealed at the AGM, however will not be adopted at this stage. Rather council will work with the winner on a few revisions of the current and proposed logo.

In the past 12 months, we have celebrated several ASA member awards:

- **Prof. Donald Melrose** won the Association of Asia-Pacific Physical Societies (AAPPS), Division of Plasma Physics (DPP) Subramanyan Chandrasekhar Prize of Plasma Physics. The citation reads: For his sustained original contributions to the theory of coherent emission processes in astrophysical and space plasmas, and for his seminal contributions to the theory of quantum plasmas.
- **Dr Shari Breen** (CSIRO) was awarded a L’Oreal-UNESCO For Women in Science Australia Fellowship. The \$25,000 award was presented in recognition of her scientific achievements over the past few years and future leadership potential.

In addition, Parkes observatory staff member **John Sarkissian** was awarded the Medal (OAM) of the Order of Australia in the Queen's Birthday 2016 honours list. Many of the ASA community will know John, and appreciate the support he has provided to Parkes telescope, and the wider astronomy community over many years.

One of the highlights of the year was the launch of the 2016-2025 **Astronomy Decadal Plan** on the 12th of August at Parliament House. This document serves the whole community, and thanks must go to Stuart Wyithe, the editors, working group leaders and members and all who contributed to the document.

The governance of Australian telescope facilities underwent an assessment process by the Department of Industry, Innovation and Science – as ASA president I was the ASA representative on this Astronomy Governance Working Group (AGWG). The met monthly between November 2015 and June 2016, and provided 2 implementation plans for governance (a corporate commonwealth entity, and a subsidiary of CSIRO). These plans will be presented to the relevant minister in due course (delayed due to the recent federal election).

The last 12 months brought about some changes in Australian telescope access, including a new Australian Keck agreement, the first science from ASKAP BETA being published, progress on GMT, and a funding commitment from the Australian government for the SKA. Skymapper and SAMI had their first data releases in 2016.

The ASA council brought in a new code of conduct in 2015, which attendees all future ASA-endorsed activities are expected to follow (see http://asa.astronomy.org.au/code_of_conduct.php)

Arguably the most exciting scientific discovery of the year was the first gravitational waves by the LIGO team, announced on 12 February 2016. There are a number of Australian researchers and

institutes that are part of the LIGO team and on the discovery paper, including the University of Western Australia, Monash University, Charles Sturt University, Australian National University, the University of Adelaide and the University of Melbourne. In addition, CSIRO helped to build part of the detector in Australia. We usher in a new era of discovery in this exciting area.

3. ASA and related events in 2015/2016

Each of the ASA chapters ran a workshop/school this year, as follows:

- 8-12 February 2016: ANITA workshop and school

Monash University hosted the 10th annual workshop and summer school in Melbourne from 8th-12th Feb, attended by a record number of 92 people. The summer school, ran from 8th-10th Feb. The theme was “Dancing with the stars”, covering topics in stellar evolution and nucleosynthesis. This was attended by around 30 students and early career researchers. A major highlight was the LIGO announcement that occurred during the workshop.

- 17-18 February 2016: EPOC workshop

The inaugural EPOC workshop was held at the School of Physics, University of Melbourne over 2 days, with an optional tour on the 3rd day. Registration was free to all registrants, and travel grants were awarded to 4 people. Childcare was offered to participants. There were 34 participants on the first day, 27 on the second day, and 7 people participated online.

- 30-31 May 2016: ECR mentoring workshop, Yarra Valley

The Mentoring Workshop was very successful, with 32 participants and 11 speakers who addressed topics including career planning, mental health, nonacademic careers and work-life balance. The responses to our feedback survey have been quite positive, and have also included very helpful suggestions for the next Workshop.

- 22-23 July 2015: WiA workshop, Brisbane

The fifth ASA Women in Astronomy (WiA) workshop was held on 22-23 July 2015 at University of Queensland’s Women’s College in Brisbane. Tamara Davies (UQ) and Kate Gunn (CAASTRO) led the organization of the event. <http://asawomeninastronomy.org/meetings/wia-workshop-2015/>. The workshop focused on “*Inspiring Diversity*” for women in academic and alternate careers and explored issues that prevent women from progressing in their careers. It also provided an opportunity to have courageous conversations about gender, race, sexual orientation and women’s leadership.

More than 80 people attended the meeting, including 20 or so people participating online. Male registrants made up 33% of workshop participants (an increase from 25% last year). There was also a public event that was attended by 220 people.

- 22-23 June 2016: Equity in astronomy meeting, The University of Melbourne

Around 60 participants attended the 2016 workshop, which was held at the University of Melbourne.

4. ASA membership

The ASA membership increased again in 2016, with 731 current members (Fig.1). The M/F ratio is steady at just under 30% female members (Fig. 2). Note, in future we are looking at recording those who identify as non-binary gender, however we do not have this information recorded at present.

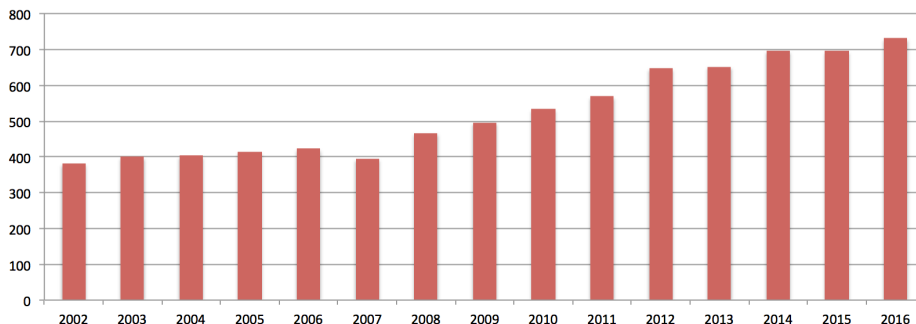


Figure 1: ASA members from 2002-2016

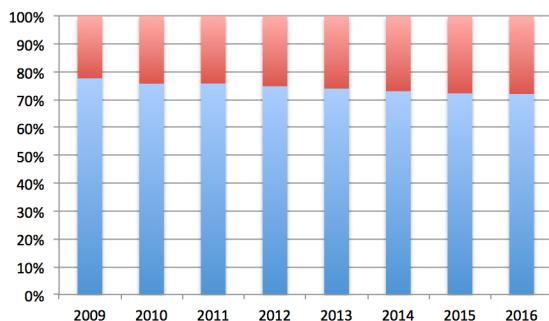


Figure 2: %M (blue) to %F (red) from 2009-2016

5. Honorary Fellow

Professor Rachel Webster has had a stellar career teaching and researching astronomy for over 25 years. She leads the Astrophysics research group within School of Physics at The University of Melbourne, comprising more than 60 research students and staff. Her observational program utilises world class equipment such as the Australia Telescope Compact Array, the Gemini Telescopes, the Hubble Space Telescope and the Chandra X-ray Observatory amongst other instruments. She is a key member of the Murchison Widefield Array (MWA), and her other research interests include quasar emission regions, gravitational lensing and cosmology; with a side interest in the physics of geothermal energy. Professor Webster is a Chief Investigator at the Melbourne node of CAASTRO, and a Board member of Australian Astronomy Limited (AAL). She was the inaugural AIP Woman in Physics Lecturer, and was awarded the Australian Mid-career Mentoring Award by Nature in 2006. Professor Webster has a long history of service to astronomy, including being chair of the NCA, a member of the ARC panel of experts, and ASA councilor (1993-1995).

6. Financial

Details on the Society's finances and audited accounts are available in the Treasurer's report. In short, the Society is financially sound, with a small increase in bank balance for 2015/2016. In 2016 council employed the services of a bookkeeper to assist the treasurer with the laborious task of processing the membership payments. We plan to move to a new membership database with online payment capabilities hopefully by the end of 2016 – this should streamline the treasurer's position greatly.

In the coming 12 months we will be looking for expressions of interest to fill the Treasurer’s position, as Ravi’s term will be up. This opportunity should appeal to someone with a desire for a new challenge and leadership position within Australian Astronomy.

For discussion: IAU Membership costs AAS Proposal

Australia has been a national member of the IAU since 1939, and the membership is organized through the National Committee for Astronomy (NCA). Recently, the Academy has requested that the Australian community make a contribution towards the IAU membership fees, which are in the order of \$20K per year (this same request has been made for international society membership fees for other disciplines as well). At the last NCA meeting, the community indicated to the NCA that we would work towards a contribution of around \$5K per annum. The Academy is now awaiting a decision on this funding contribution.

ASA council proposes a 10% levy on ASA fees to cover this contribution for **Australian-based ASA members and fellows**. This would add \$20/\$17 per fellow/member per annum to the membership fee (to be applied before the early-bird discount of \$33). We propose this charge only applies to Australian-based members, as these are the members entitled to join the IAU under the Australian membership.

This motion will be raised at the AGM.

7. Publications of the ASA (PASA)

PASA’s latest ISI two-year impact factor (reflecting citations in 2015 to papers published in 2013 and 2014) was released in June 2016, coming in at 3.245, a substantial improvement on the previous IF of 2.65 (see Fig. 3 below).

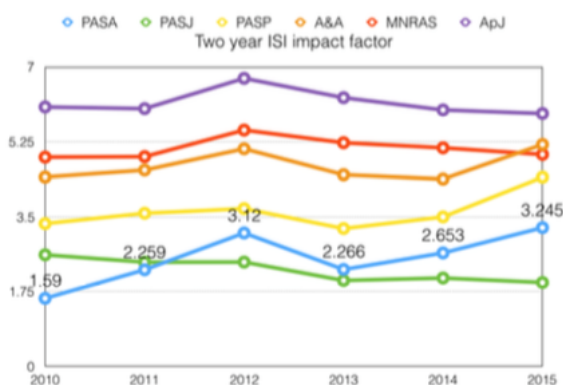


Figure 3: Astronomy journal impact factors

Highlights from 2015/2016

PASA has published some excellent papers in the last 12 months. A particular highlight has been the 7-paper Galactic Bulge special issue, and 6 shorter reviews as part of a special issue on “Disc dynamics and planet formation”, with a further 2–3 papers expected in that issue. Some very high quality articles have been received as part of a special issue on “High redshift black holes”, based on an EWASS-2015 symposium. PASA continues to receive high quality papers from the MWA

collaboration and the editor is delighted to see a trickle of code/methods/catalog papers coming through, an area in which he would like PASA to grow substantially.

During 2015/2016 the PASA datastore was opened:

<http://data-portal.hpc.swin.edu.au/institute/pasa>.

This major new initiative is open to all PASA authors free-of-charge. Datasets can be in any format with up to 1Tb of storage. Each dataset is assigned a permanent digital object identifier (doi), linked in a footnote from the published paper, on the journal homepage, and in the NASA ADS entry.

In 2015, PASA brought in optional double-blind reviewing. To date one author has chosen to use the double-blind reviewing, which has worked successfully.

8. ASA Prizes and awards

The following prizes will be awarded during the 2016 Annual Scientific Meeting (ASM):

- **The Bok Prize** for outstanding research in astronomy by an Honours or eligible Masters student.
Winner: Samuel Hinton (UQ) / Highly Commended Annabelle Austin (UTas). Samuel is currently overseas so will not be attending the ASA meeting. He will give a colloquium at Swinburne later in the year and receive his prize.
- **The Charlene Heisler Prize** for the most outstanding PhD thesis in Astronomy or a closely related field.
Winner: Vikram Ravi (UMelb) / Highly Commended: Elisa Boera (Swinburne)
- **The Louise Webster Prize** for outstanding research by a scientist early in their post-doctoral career.
Winner: David Nicholls (ANU)
- **The Peter McGregor Prize** for exceptional achievement in astronomical instrumentation.
Winner: to be announced at the conference dinner

- **Encouraging gender diversity**

The ASA is strongly committed to improving the representation and status of women in astronomy. The Society expects that female candidates should comprise at least 20% of the nominations for each prize and encourages institutions to help achieve this goal.

Percentage of female nominations over previous years:

Bok: 50% (2016), 83% (2015), 50% (2014), **0% (2013)**, 17% (2012)

Heisler: 25% (2016), 40% (2015), 33% (2014), 25% (2013), 20% (2012)

Webster **0% (2016)**, 100% (2015), 33% (2014), **0% (2013)**, **0% (2012)**

And the following prize was awarded at the National Australian Convention of Amateur Astronomers (NACAA), on March 26 and presented by Lee Spitler (Macquarie/AAO)

- **The Berenice and Arthur Page Medal** for excellence in amateur astronomy.

Winner: Roy Axelsen (Director of the variable star section of the Astronomical Association of Queensland)

Many thanks to Tanya Hill and the judges of the awards.

9. Women in Astronomy Chapter (WiA)

Sarah Brough continues to chair the WiA chapter. The ASA council strongly supports the request from the WiA chapter to expand their remit to include wider diversity and equity issues – the new chapter will be called the Inclusion, Diversity and Equity in Astronomy (IDEA) chapter. The IDEA chapter will be launched at the WiA lunchtime meeting on Wednesday 6th July, and the new aims and scope of the IDEA chapter can be found at: <https://asa-idea.org/>

The WiA chapter has seen a growth in membership of 19%, to 152 members (34% of chapter members are men). The WiA chapter has provided guidance and updates to the ASA on the Conference code of conduct, and has also proposed a new Conference gender equity endorsement policy. On 22/23 June 2016 the Chapter ran its annual WiA workshop at The University of Melbourne - this year's theme was *Inspiring Diversity*.

The chapter will run a demographic survey of members in the coming 12 months. Other activities include hosting an anti-harassment advice webpage on the IDEA chapter webpages, co-organising the speed-meet-a-mentor session with the ECR chapter at the ASA ASM, and continuing with the Pleiades awards scheme (with the next call for applications in September 2016).

10. Education and Public Outreach Chapter (EPOC)

Rob Hollow continues to chair the EPOC chapter, whose mission is:

To advance the level of public awareness of the excitement of astronomy and of the international importance of Australian astronomy, while promoting the teaching of astronomy to students and the public.

The chapter has seen an increase in membership of around 10% in the past year, and the highlight of the past year was the inaugural EPOC meeting in February 2016. The next EPOC meeting is planned for December 2017. Other planned activities of the chapter include investigating an awards scheme for outreach, and instituting a regular email to chapter members.

11. Australian National Institute for Theoretical Astrophysics (ANITA)

Daniel Price continues to be the chair of ANITA.

The goals of ANITA are to raise the profile of Australian theoretical astrophysics, encourage national collaboration, foster international links, facilitate theoretical astrophysics meetings, and provide input into national policy.

The chapter grew in membership by approx. 7% over the past year, to 144 members. The main activity of ANITA is the yearly workshop/school – in 2016 this was held at Monash University from 8-12th of February, at which a record 92 people attended.

Other activities include launching a colloquium speaker database, and the chapter will also continue to develop the online lecture series. Next year the chapter will run a workshop and hackfest at the

University of Tasmania, Feb 6-10th 2017. The chapter will also develop a strategic plan based on their recent member survey.

12. Early Career Research Chapter (ECR)

Sarah Martell continues to chair the ECR chapter. The aims of the chapter are to:

1. **Inform** the members about opportunities for professional training and support
2. Provide **training** for the members in areas of professional development
3. **Connect** the members with each other, and also with senior researcher mentors, providing a support network
4. Acting as an **advocacy and representation** body for its members

The ECR chapter has had a large increase in membership over the past 12 months of 48%, to a total of 117 members.

Activities over the past 12 months include co-organising the speed-meet-a-mentor session at the ASA ASM meeting, and running an ECR mentoring workshop from 30-31 May 2017.

The ECR chapter plans to run 2 one-day workshops next year for their members. They will also continue to work with ASA council on ways to increase support for ECRs in preparing for a broad range of careers. The chapter will continue with their one-to-one mentoring program.

13. Communications (Information flow to members)

The ASA email mailing list remains the primary communication avenue for ASA news. Members can post directly to the list asa@physics.usyd.edu.au. Michael Brown is the ASA's media and outreach coordinator – a relatively new role that oversees the ASA facebook and twitter accounts and provides general media advice to the society. The ASA Facebook Page continues to be a valuable avenue for quickly highlighting recent articles, awards and upcoming events, and the ASA twitter account (@AstroSocAus) has nearly 500 followers and regularly tweets ASA and general astronomy news. The ASA Events Calendar lists all ASA-sponsored events as well as conferences, workshops and meetings that are open to broad Australian and international participation (see <http://asa.astronomy.org.au/calendar.html>).

14. Constitutional changes

A number of constitutional changes need to be made over the coming months, with respect to the wording associated with the society's awards. The changes will be circulated to the ASA membership in coming months for approval.

15. Progress against 2015/2016 priorities

1. Run a workshop on science communication.

This item is now complete (see section 3, EPOC workshop).

2. Consider whether to continue the history project beyond the formation of the Society.

Council has decided the project should continue, concentrating on one or 2 key aspects of the ASA's history (e.g. PASA).

3. Implementing the Peter McGregor Prize.

This item has been implemented, and the inaugural Peter McGregor Prize will be awarded at the 2016 ASM conference dinner.

4. Strategic planning with the ASA Chapters regarding structures and priorities.

This item is carried forward into 2016/17.

5. Review of student engagement with the ASA, including the cost and ASA support of ASM attendance for students.

Council has run a survey, and has 2 actions from the outcomes of the survey:

- a) to ensure students are aware of funding options
- b) to make a funding request pro-forma for students requesting money from the ASA

Special thanks to Alex Codoreanu for organizing this survey of the students.

6. Review of engagement with the New Zealand professional astronomy community.

Council members have been proactively approaching the NZ professional community for participation in local conferences and workshops. This item will carry forward into 2016/17 year.

7. Conduct a census of Society membership to establish detailed demographic information.

The Women in Astronomy Chapter will undertake this item.

8. Review ASA documents and policy with a view to ensure diversity and inclusion principles.

This item is partially complete (constitution and by-laws have been checked so far). To be carried forward into 2016/17.

9. Consider the ASA's role in providing resources to aid students and supervisors in raising awareness of the broad range of career opportunities for students.

Council, in conjunction with the ECR chapter have created a list of alumni, and this was utilized for the speed-meet-a-mentor at the 2016 ASM.

16. New Priorities for 2016/2017

In addition to the carry-forward priorities, council has identified the following possible priorities to concentrate on for the next 12 months (for discussion):

1. ASA council will consider opportunities to make more public policy statements where appropriate, and increase participation with, and input into, STA.
2. Implementation of a new membership database and online subscription system
3. Investigate the economic impact of astronomy activities in Australia, including a list of Australian commercial/industry outcomes.

4. Increase the visibility of the ASA, and Australian astronomy in general, eg. via coordinated press releases for the 2017 ASA ASM.
5. Continue working towards support for ECRs and growing the ASA Alumni network

17. ASA Council for 2016/2017

Nominations were sought from the student membership for a new student representative, and the new representative is Chris Curtin from Swinburne University of Technology. Many thanks go to Alex Codoreanu for his enthusiastic contributions over the past 12 months.

There are no other changes to the council for 2016/17.

18. Harley Wood School of Astronomy and ASM/AGM 2017

The 2016 HWSA and ASM/AGM will be hosted by the RSAA, Australian National University, Canberra, in 2017.

19. Closing Remarks

This is an exciting time in astronomy – we are on the cusp of next generation facilities coming online in multiple wavelength regimes, and the potential move away from national to international facilities in the space of a decade. The importance of theory and modeling, and related capacity in high performance computing is greater than ever. I wonder what the next 50 years will bring . . .



Virginia Kilborn
President, Astronomical Society of Australia

P. S. Don't forget to open the time capsule in 50 years time!