



# ASTRONOMICAL SOCIETY OF AUSTRALIA

*Incorporated in the ACT*

*ABN 37 660 297 848*

## PRESIDENT'S REPORT

UNIVERSITY OF TASMANIA, 6 JULY 2010

### 1. Highlights

#### *Significant achievements and recognition of ASA members*

This past year has seen a number of Society members receiving highly prestigious awards in recognition of their research and contributions to astronomy. They were:

- Dr John O'Sullivan - awarded the Prime Minister's Prize for Science for his achievements in astronomy and wireless technologies; also elected a Fellow of the Australian Academy of Science.
- Professor Elaine Sadler - elected a Fellow of the Australian Academy of Science.
- Dr Fred Watson - appointed a Member in the General Division of the Order of Australia for his services to astronomy.

I congratulate the above members on their awards. The recognition of these awards by the general public and colleagues in other fields reflects well on the health of astronomy in general. I therefore encourage members to nominate colleagues for the numerous national and international awards that are available to scientists.

#### *The Astronomy Mid-Term Review process*

The current Australian astronomy decadal plan was published in 2006. As happened with the previous plan, there is currently a process underway to review progress. The purpose of the review, being commissioned by the National Committee for Astronomy (NCA), on which I am the Society's representative, is to: re-affirm the goals of the plan; review progress in meeting these goals; and provide revised implementation plans. The review committee, chaired by Professor Elaine Sadler, released an "Issues Paper" dated June 4 via the Society's email exploder. All members of the Australian community are invited to respond to issues raised in this paper, either by email to [astro\\_midterm@physics.usyd.edu.au](mailto:astro_midterm@physics.usyd.edu.au), or by contacting the chair directly. I am pleased to report that the Society and ASM organisers have been able to schedule presentations and discussion relating to mid-term review on Wednesday July 7. An update on possible ESO membership from Professor Jeremy Mould, and a discussion between department heads will also occur during the ASM. In a departure from the recent norm, I will chair the combined department heads/NCA meeting on behalf of the ASA on Thursday July 8 whilst Professor Sadler will chair an NCA-only meeting.

#### *The new AAO*

As noted in last year's report by Professor Warrick Couch, the Federal government has committed to the continuation of the AAO under the new name of "Australian Astronomical Observatory" for a period of 10 years. This new phase in Australian astronomy started on July 1, and I'm sure members will join with me in wishing the new organisation the best of luck. I am pleased to note that the AAO held a symposium from June 21-25 at Coonabarabran to mark this transition and to celebrate 36 years of discovery. It is also pleasing that many Society members, past and current staff and distinguished international colleagues were able to attend.

#### *CASS and ICRAR*

I'd also like to note the creation of two new radio astronomy organisations in Australia. Firstly CSIRO has formed a new division of Astronomy and Space Science which incorporates the ATNF as well as the Canberra Deep Space Communication Complex. I am sure members will join with me in welcoming the inaugural Chief, Professor Phil Diamond, into this new and exciting role. The past year also saw the official opening of the International Centre for Radio Astronomy Research (ICRAR), a joint venture between Curtin University of Technology and the University of Western Australia, funded by the government of Western Australia and directed by Professor Peter Quinn.

#### *Giant Magellan Telescope*

Shortly after last year's ASM, and during the 40th anniversary Apollo 11 landing celebrations, we were delighted to hear the Minister Carr's announcement of \$88M funding towards the capital cost of the GMT project. I congratulate the ANU and the AAL on this outcome which will help deliver Australia the 10% share of an ELT envisaged in the Decadal Plan. I note the workshop "Challenges for the GMT" held from 15-16 July

at Swinburne University was highly successful, and attracted over 80 participants, including many of our young astronomers.

#### *Super Science Funding*

Although the funding opportunity was announced last year, the outcomes of two major Super Science initiatives, the ARC-administered Super Science Fellowship scheme and the AAL-administered \$10M Education and Investment Fund, were decided earlier this year. I congratulate recipients of this funding. It was particularly pleasing to see new investment in young postdocs through the super science scheme. Building and sustaining human capacity in astronomy and education is important in the effective utilisation of the major new astronomy and computer infrastructure that members will have seen funded in recent years. The 16 successful super science proposals in astronomy will deliver 31 three-year fellowships starting in 2010 and 2011.

#### *Theory and Astroinformatics Graduate Schools*

From January 17-22, our Chapter, the Australian National Institute for Theoretical Astrophysics (ANITA), ran the second Summer School in Theoretical Astrophysics for Australian postgraduate students at Monash University. The topic was "Stellar Nucleosynthesis". Nine international and six Australia lecturers and 25?? students attended. This initiative is being funded from surplus funds that were returned to the Society from the XXVth International Astronomical Union General Assembly that was held in Sydney in 2003. The plan is to hold such schools every two years while funds permit.

In 2011, the ASA expects to support another *Astroinformatics School* to train students in a wide range of computing skills, techniques, and astronomical software. This meeting will be held in Perth with an additional training session in HPC and parallel programming.

#### *Women in Astronomy*

Following a successful meeting at the Melbourne ASM last year, Council agreed to a proposal to form a new (and third) Chapter of the ASA - Women in Astronomy - to be chaired by Dr Sarah Maddison (Swinburne). Council will fund expenses for the new chapter of up to \$1000 per year. The goals of this Chapter are to raise the profile of women in Australian astronomy, collect statistics on the status of women in astronomy, provide information, liaise with other international bodies representing the status of women in astronomy, and organise women in astronomy meetings. A web page can be found linked to the Society's web pages at <http://asa.astronomy.org.au>.

## **2. ASA Membership**

The last year has seen another increase in Society membership. Over this period, the number of financial members has increased from 498 to 510. On behalf of the Society, I would like to welcome our new members and fellows, and encourage them to be active and visible participants within the Society, through attendance at its meetings, schools and, if appropriate, participation in its Chapters. The substantial number of Society members reflects well on the role of the Society and the health of astronomy in Australia. However, our healthy membership also creates challenges in management and administration. In an attempt to keep membership fees low whilst maintaining a professional administrative structure, Council occasionally outsources administrative jobs such as the new web-based system for updating membership details. Although the Society does not employ an administrator on a regular basis at the moment, we are looking into employing a professional bookkeeper on a part-time basis.

Our Corporate Members (AAL, AAO, ATNF, Australian Antarctic Division, RSAA, Swinburne and Sydney's Science Foundation for Physics) continue to support the Society. Their contributions are used each year to help fund the Harley Wood Winter School. In future years, the Society hopes to increase its corporate membership by offering increased benefits such as highlighted presence on the Society's web pages and display and information areas at Annual Scientific meetings.

It is also with much pleasure to announce Council's appointment of W. Miller Goss as an Honorary Fellow of the Society.

## **3. PASA**

The *Publications of the ASA* (PASA) continues to thrive under the leadership of Professor Bryan Gaensler and his editorial colleagues: Kate Brooks, Simon Driver, John Lattanzio, Stuart Wyithe, Stuart Ryder and Duncan Forbes, ably assisted by CSIRO Publishing. The 2009 PASA impact factor has increased by a massive 50% to the dizzy heights of 3.79, which is not far behind the *Astronomy & Astrophysics* (4.18), an ERA A-ranked journal. PASA is now Australia's second-highest ranked journal! Whilst the impact factor is not the sole driving force for the Society's continued support of PASA, it greatly helps members to make it a journal of first choice for certain publications. In a further move to increase the international profile of PASA, Council will shortly be appointing an International Advisory Board to act in a further advisory and advocacy role for the

journal.

I thank the Editorial Board for this excellent result, and for the continued stewardship of the Society's journal. I also thank the departing Editorial Board member, Peter Cottrell for his contributions. I also left the Editorial Board after a one-year extension to my term.

#### 4. **Loss of prominent Society members**

It is with sadness that I note the passing of the following members:

John Davis - widely recognised as a world leader in the technically difficult subject of optical stellar interferometry. His contributions were recognised in 2005 with the ASA's Ellery Lectureship and in 2008 in a workshop, 'SUSI: Past, Present and Future', to mark his 75th birthday. John arrived at the University of Sydney in the early 1960's to join Robert Hanbury Brown and colleagues in developing the Narrabri Stellar Intensity Interferometer. The work of that instrument made fundamental contributions in stellar astrophysics that remain significant today. The development of stellar interferometry continued under John's leadership of the Sydney University Stellar Interferometer (SUSI). John's legacy is being carried forward by a new generation of staff and students who are expanding SUSI's capabilities and scientific output.

Ben Gascoigne - a long time staff member at Mt Stromlo, having come to Australia in 1941 to join a team working in optical munitions at the Commonwealth Solar Observatory. After the war he explored his research interests in stellar evolution, distance measurement and faint star photometry, but he is perhaps best known for his work in establishing the AAT and the design of its optics. He was honoured with an Order of Australia in 1996 for his service to Australian astronomy.

Walter Stibbs - his academic career began at the University of Sydney. He then became a member of the staff at Mt Stromlo shortly after the commencement of the 2nd World War and carried out innovative work on optical munitions. He also lectured on Defence Science at the University of New England. Following the war he returned to Mt Stromlo and collaborated with Richard van der Riet Woolley on a classic text on stellar atmospheres: *The Outer Layers of a Star*. Also, during this period, Walter published seminal papers on the variability of magnetic rotating stars. Walter travelled to the UK in 1951, obtained a doctorate from Oxford in 1954 and was subsequently appointed, in 1959, Napier Professor of Astronomy at the University of St. Andrews - a position which he held for 30 years. Following his retirement, Walter returned to the ANU and held a Visiting Fellow appointment in the School of Mathematical Sciences and at Mt Stromlo.

#### 5. **Harley Wood Lecturer**

The ASA created the annual Harley Wood Public Lecture in honour of the first President of the ASA, who was also the NSW Government Astronomer at the Sydney Observatory for more than 30 years. The focus of this award is to enhance the public appeal of astronomy and the aim is to select renowned and exciting speakers who will carry on the legacy established by Harley Wood. The Harley Wood Lecturer for 2010 is **Prof Elaine Sadler** from the University of Sydney, recently elected a Fellow of the Australian Academy of Science.

#### 6. **The Louise Webster Prize**

The Louise Webster Prize for Early Career Researchers is in its 2nd year. The prize honours Dr Louise Webster who was an inaugural staff astronomer at the AAO, and later an academic staff member in the School of Physics at UNSW. She passed away in 1990 at the age of 49, after a long illness. Louise was passionate about promoting astronomy to young people and the importance of mentoring her younger colleagues in the early stages of their research careers. It is with great pleasure to announce the 2010 winner is **Dr Michael Ireland**, currently on a postdoctoral appointment at the University of Sydney, for his nominated paper: "The Disk Around CoKu Tauri/4: Circumbinary, Not Transitional" (M.J. Ireland, A.L. Kraus, 2008, ApJ, 678, L59).

#### 7. **Charlene Heisler Prize**

Each year, the ASA commemorates the contributions to astronomy of Dr Charlene Heisler – who during her short career became particularly well known for her encouragement and mentoring of students – by awarding a prize to the author of the best PhD thesis in astronomy or a closely related field, accepted by an Australian university in the previous calendar year. This year the prize is awarded to **Dr Adam Deller** for his Swinburne University thesis entitled "Instrumentation, algorithms and pulsar parallax". The assessment panel also recommended that Dr Clancy James receive a special commendation for his Adelaide University thesis entitled "Ultra-High Energy Particle Detection with the Lunar Cherenkov Technique".

#### 8. **Bok Prize**

The Bok Prize is awarded annually for outstanding research in astronomy by an Honours student at an Australian university. It remembers Bart Bok, a former Director of Mount Stromlo Observatory, who energetically promoted the undergraduate and graduate study of astronomy in Australia. This year, the Prize is awarded to Miss **Madusha Gunawardhana** for the Macquarie/AAO thesis "Constraints on the Evolution of

the Stellar Initial Mass Function". The selection committee also commends Mr Vikram Ravi for an excellent ANU thesis "Stellar Radio Transients: From Brown Dwarfs to Pulsars And Beyond". Congratulations to both!

#### 9. **Page medal**

The ASA normally awards the Berenice Page Medal for excellence in amateur astronomy every 2 years. The 2010 medal is awarded to **David Gault** for significant observations of Pluto occultations. David's observations have helped lead to refinements in orbital parameters for Pluto and to a greatly improved determinations of Pluto's atmospheric structure. David developed his own photometer video recording system with high quality timing to provide Pluto transit data to a professional network of astronomers. His observational contribution was equal to some professional observatories and of great value to studies which resulted in two international refereed journal papers and several AAS bulletins. David is listed as an author on all these papers. David has since adapted his system for minor planet observations.

Special mention is also made by the selection committee of the work of Anthony Wesley for his discovery of a new impact cloud feature on Jupiter and his quick action to bring this to the attention of professional astronomers. This discovery was very valuable and has ultimately resulted in a reassessment of the rate of such impacts.

#### 10. **Smp2010**

Science meets Parliament (Smp) is an annual event organised by the Federation of Australian Scientific and Technological Societies (FASTS), where members of its affiliated associations and societies gather at Federal Parliament in Canberra to primarily to talk to politicians about their research and broader issues to do with science. This year Smp was held on 9-10 March, and the ASA was ably represented by Lisa Harvey-Smith (USyd), Amanda Karakas (ANU) and Daniel Price (Monash). Simon O'Toole (AAO) was also present. Participants were carefully briefed this year, based on the excellent reports of previous participants, a tradition carried on by this year's attendees. Discussions were held with various MPs, Senators, departmental staff, fellow scientists and reporters.

#### 11. **IYA2009 Activities**

I'm pleased to report the tremendous success of the International Year of Astronomy for 2009. Through substantial Federal funding, support from virtually all institutes, and the dedication of the professional and amateur communities, a great amount of enthusiasm was generated for astronomy. One of the most successful events that the ASA was directly involved in was the IYA Lecture Series, organised in conjunction with the Australian Institute of Physics. Nine high-profile Australian and international astronomers were invited to tour various institutions. In total, they delivered around 30 public talks in all States, with a total audience of around 3000 members of the public. We greatly appreciate the efforts of our international guests Reinhard Genzel and Bob Kirschner, and our Australia colleagues: Brian Boyle, Paolo De Souza, Marc Duldig, David Jamieson, Geraint Lewis, Charley Lineweaver and Ray Norris.

The ASA also allocated \$8000 to "seed grants" to kickstart seven outreach activities in Vic, NSW and Tasmania. These mostly involved activities or equipment outside the major cities and included data projectors, library resources, camps, film, theatre and scholarship.

#### 12. **Education and Public Outreach Committee (EPOC)**

Members have been involved with National Science Curriculum (NSC) meetings, with the latest Australian Curriculum, Assessment and Reporting Authority (ACARA) sponsored meeting being held in Sydney on 17th June to discuss the senior physics and chemistry components of the NSC. Astronomy and space features prominently in the senior physics curriculum though the amount of material is currently under discussion. Nick Lomb has kindly put together a fact sheet for the 2012 total solar eclipse which hopefully will appear soon on the EPOC website.

#### 13. **ASA Priorities for 2010-2011**

Progress against Council's set of 2009-2010 priorities has been as follows:

- *Initiate a project to document the history of the ASA*  
This has begun with a series of interviews being conducted by Roslyn Russell, known to some members as author of a recent book on Harley Wood and his wife Una.
- *Define a 'Code of Ethics' for ASA members*  
This has been drafted and is currently being discussed.
- *Provide information and advice to students to help them enhance their career prospects*  
Ongoing.
- *Consider launching an electronic newsletter, perhaps in conjunction with the AIP*  
Proposal from Science in the Public under consideration.
- *Improve the archiving of ASA records*  
New sections of the web pages have been created to make the President's annual report and the

minutes of the AGM available to the membership. Council-only pages have also been created for other documents as an electronic archive, separate from the individual Council Officers' archives.

For 2010-2011, Council has discussed the following priorities and welcomes comment from the membership and suggestions for new initiatives:

- Document the history of the ASA.
- Post draft code of ethics for member discussion.
- Publish FAQ sheet for students to help them enhance their career prospects.
- Roll out a trial astronomy events bulletin.
- Develop the Women in Astronomy Chapter.
- Enhance the Australian Astronomy web site.
- Review level of executive support.

#### 14. **ASA Council for 2010-2011**

I would like to thank all members of Council for their efforts and contributions, and to acknowledge in particular Diana Londish, who resigned as Treasurer after 4 years of service and to Stephen Hughes, Geraint Lewis, and Brad Tucker (student representative), whose terms come to an end at this AGM.

Following the procedures laid out in our Constitution, the current Council nominated Katrina Tapia-Sealey as the Society's new Treasurer filling the casual vacancy that Diana's resignation created. As well as being a PhD astronomer from UNSW, Katrina also has experience in small business, making her a well-qualified choice for Treasurer. Following counting of a ballot prior to the AGM, membership of the Council for 2010/11 will be:

Lister Staveley-Smith	President
Kate Brooks	Vice-President
Warrick Couch	Immediate Past President
John O'Byrne	Secretary
Marc Duldig	Secretary
Katrina Tapia-Sealey	Treasurer
Andrew Hopkins	Councillor
Helmut Jerjen	Councillor
John Lattanzio	Councillor
Kevin Pimblett	Councillor
Andrew Walsh	Councillor
Donna Burton	Student Representative
Bryan Gaensler	Chair, PASA Editorial Board
Tanya Hill	Prizes and Awards Coordinator

Welcome to the incoming councillors, Andrew Hopkins and Andrew Walsh, and the incoming student representative, Donna Burton.

#### 15. **Next Year's ASM/AGM**

At its meeting on Sunday, Council decided to accept the offer from the University of Adelaide to host the Annual Scientific Meeting from 4-7 July 2011, together with the Annual General Meeting and the 2011 Harley Wood Winter School.

My final duty is to thank the LOC and the SOC for their organisation of this meeting. In particular, LOC members: Simon Ellingsen (chair), Karen Bradford, Jay Blanchard, Shari Breen, Andrew Cole, Jim Lovell, Minnie Mao, Jamie McCallum, Anita Titmarsh and SOC members: John Dickey (chair), Maria Cunningham (UNSW), Michael Drinkwater, Marc Duldig, Simon Ellingsen, Andrew Hopkins and Dave Warren.

The Harley Wood Winter School, which had the theme "Powerful Objects" and was held at the Woodfield Lodge, north of Hobart, and I would like to thank all the people involved in its organisation (LOC: Jay Blanchard, Shari Breen, Minnie Mao, Anita Titmarsh; SOC: Jay Blanchard, co-chair, Anita Titmarsh, co-chair, Jacinta Delhaize, Vicki Lowe, Sarah Traine, Marc White, Phoebe de Wilt) as well as those who gave freely of their time to present lectures at the school.

Lister Staveley-Smith  
July 6, 2010 (updated following the AGM)