

## ASTRONOMICAL SOCIETY OF AUSTRALIA

Incorporated in the ACT ABN 37 660 297 848

## President's Report for 2023/2024 Tuesday 25th June 2024

#### 1. Council 2023-2024

Stas Shabala	President
Ashley Ruiter	Vice President
John Lattanzio	Immediate Past President
John O'Byrne	Secretary
Marc Duldig	Secretary
Yeshe Fenner	Treasurer
Christoph Federrath	Councillor
Richard McDermid	Councillor
Bernhard Mueller	Councillor
Sarah Pearce	Councillor
Ivy Wong	Councillor
Pradosh Barun Das	Student Representative
Ivo Seitenzahl	Chair, PASA Editorial Board
Tanya Hill (Co-opted)	Prizes and Awards Co-ordinator
Michael Brown (in 2023)	Media and Outreach Co-ordinator
Vanessa Moss (in 2024)	Media and Outreach Co-ordinator

I would like to thank all Council members for their time and efforts in the past year in support of the Society. Particular thanks are due to the Council members holding ongoing roles in the Society (John O'Byrne, Marc Duldig, Yeshe Fenner, Ivo Seitenzahl, Tanya Hill), and those who have left after a decade of service (Michael Brown).

A big thanks also to Gary Da Costa for continuing in his role as our "Public Officer"; and to Deb Gooley who has continued to provide outstanding administrative support as well as good cheer for the ASA.

Thanks also to our previous and new Chapter Chairs:

ANITA Chair: Fiona Panther (and predecessor, Ilya Mandel)

ECR Chair: Henry Zovaro (and Amit Sta, who replaced Henry in June)

EPOC Chair: Jackie Bondell

GAP Co-Chair: Mark Krumholz (there is also an AIP Co-Chair: Martin White)

IDEA Chair: Devika Kamath

SWG Co-Chairs: Themiya Nanayakkara and Clancy James

CWG Chair: Vanessa Moss

## 2. The year in review

The past 12 months have provided many highlights, including:

- Continued growth of the ASA's newest Chapter on Time Domain Astronomy. Elections for the TDA steering committee have been held, and this chapter already has 85 members.
- PASA continues to provide an excellent publishing alternative to astronomy "majors". The past year has seen an increase in the volume of high-quality submissions, and PASA will be changing to Open Access publishing in 2025. For the majority of ASA members whose institutions are covered by the CAUL agreement with Cambridge University Press, this change means that the articles authored by them will be freely available for reading by anyone in the world.
- The ASA Associate Membership category is being expanded to include nonastronomers in roles which support the advancement of astronomy, such as technical staff at observatories. This follows an excellent suggestion by an ASA member.
- The Corporate Membership of the ASA has expanded significantly over the past year. This membership category is free, and has been taken up by the majority of astronomy institutions in Australia. Benefits include the opportunity to advertise at the ASM, and listing on the ASA web page as a Corporate Member, showing shared interests of the ASA and the institution.
- The ASA community had a mature and respectful discussion on issues related to the Voice Referendum in late 2023. Following clear results from a membership survey, the Society issued a formal statement in support of the Voice. I was impressed and heartened by the respectful way in which the ASA members approached this emotive and potentially difficult issue – an approach which to me spoke volumes about the positive culture within our community.

Much of the Society's work is done by community members through the ASA Chapters and Working Groups. The summary of each Chapter's work is below. Some highlights include:

- The ECR chapter established a successful new ECR colloquium series and ran Python workshops facilitated by Astronomy Data And Computing Services (ADACS).
- The IDEA Chapter ran the biennial Pleiades Awards. These awards are an important feature of the ASA calendar and represent a significant investment of effort by both participating institutions and the IDEA Steering Committee. My thanks and congratulations to all who participated. In the spirit of continuous improvement, the IDEA Steering Committee is currently reviewing the Pleiades process.
- The ANITA Chapter ran its annual workshop, and a summer school on Tidal Disruption Events, in February.
- The EPOC Chapter is working on the development of a new Astronomy Careers Guide.
- The Group for Astroparticle Physics (GAP) ran a full-day focus session at the summer AIP meeting in Canberra in December, on the theme of radio-gamma ray synergies, with particular attention to the opportunities offered by the combination of CTA and ASKAP / SKA.

- The Communications Working Group has set up a new Slack channel for ASA communications.
- The newly established Eclipse Working Group is working hard to prepare for the upcoming 2028 solar eclipse, which will cross Australia and see 4 minutes of totality over Sydney.
- The Sustainability Working Group has been closely involved in planning for the 2024 ASM.

As always, I encourage all members to consider getting involved in the work of ASA Chapters.

There are of course also challenges along the way.

The past year has seen a period of government policy change at the national level, including an increased focus on the growth of STEM industries. While astronomy has much to offer industry, the ASA has continued prosecuting the case for the importance of fundamental research. We have made formal submissions to several government reviews, including on National Science and Research Priorities, and proposed changes to operations of the Australian Research Council. I am pleased to say that much of this work has been done in close collaboration with the Australian Institute of Physics and the Royal Australian Chemical Institute, providing a united voice for the physical sciences in Australia to complement that of Science and Technology Australia (STA).

The ASA student travel grants have proved very popular in the post-COVID period, to a point where the Society can no longer afford to fully fund all applications. The ASA Council is committed to supporting students as best we can and is working on developing a new process which aims to ensure that all student members have an opportunity to attend at least one relevant meeting over the course of their HDR candidature.

#### 3. Code of Conduct and Equity and Conduct Committee

It is the policy of the Astronomical Society of Australia (ASA) that all participants in its activities enjoy an environment that is free from discrimination and harassment, and that its members conduct themselves appropriately during all professional activities. Council has previously convened an <u>Ethics and Conduct Committee (ECC)</u>. The ECC is charged with oversight of the ASA Code of Conduct and Statement of Ethics as well as handling of potential breaches. There have been no new investigations required from the ECC in the last 12 months. A review of an old conduct complaint was requested based on claimed additional evidence. After review by members of the Executive who were not involved in the original assessment of the complaint, it was determined that there was no new independent or corroborated evidence and the request for a review of the decision was denied.

#### 4. Awards and Honours

Members of the ASA were recognized with awards over the past 12 months:

- Professor **Mark Krumholz**, from the Australian National University, has been elected as a member of the Australian Academy of Science. The citation recognises Mark's contributions to our *"understanding of physical mechanisms that control the rates at which galaxies form stars, the mass distribution of those stars, and the way stars cluster in space and time".*
- Dr Keith Bannister (CSIRO) and Professor Ryan Shannon (Swinburne), for receiving the Jackson-Gwilt Medal of the Royal Astronomical Society for their contributions to establishing the field of FRB cosmology.
- Mr Mark Stickells was awarded a Member of the Order of Australia (AM), "For significant service to science, particularly information technology, and to the community."

Break / IDI	EA Chapter	Break / ANITA Break / SWG Chapter Chapter		Break / ATNF Town Hall	Break / EPOC Chapter	Break / AAT Break / GA Town Hall Chapter		
ASA prize talks: Webster		ASA	AGM	SKA + ESO P	lenary session	Future of Australian Astronomy plenary Student prizes + closing		
Galaxies:		200 100	GW &		photo (15min)			
clusters & groups	Stars II	Cosmology I	transients II	SKA + data	Surveys +	Finish / Afternoon Tea		
Break		Break		pipelines	Outreach	SKA workshop		
	200			Break / E	arly finish	(online)		
Galaxies: AGN & feedback	Stars III	Cosmology II	MW & local Universe I		Training Event: ML Deep Dive II		Training Event: ML Deep Dive	
	Training Event: ML Deep Dive I	Harley Woo			(online)		III (online)	
	(online)	Krystal D	De Napoli	Conference Dinner (Doltone				
Rainbow Dinner				House Hyde Park)				

(ASM) was held in ity and CSIRO. The tional healthy online vo thirds of the total

attenuance being ECRS (students of postdocs). of /// of registered participants reported their gender as male, 36% as female, and 4% prefer not to say/not declared. Childcare arrangements (vacation care and long daycare) were used by five ASA participants. In a marked change from the 2022 ASM, no positive COVID cases were reported to the organisers

220		Alle	ocated talk:	117	53.18%	-			
						er C		CT.	
124	56.36%			66	56.41%		AREER STA	GE	
	38.18%				36.75%				
6				4	3.42%				
5	2.27%			3	2.56%				
								Student 47%	
118	53.64%			57	48.72%				
58	26.36%			36	30.77%				
41	18.64%			21	17.95%				
3		_		3	2.56%				
		.8%			Postdoc 18%				
		27%	nsisted		PNTS/S	elf-			37% woman, 3% no
	6	2%	'NTS),		/Not-dec 3%		GENDER		40 poster presente
	22	6%	pre-rec e of the						1 topics was broad astronomy communi
2000		_							
GN and galaxy evolution			par		netary systems_ gy and	Outreach and education		nd galaxy plution	
as	Time domain tronomy (incl. sars, FRBs, SETI)		Gravitational wa and fundament theories of grav Cosmology and	al ity				astro	e domain nomy (incl. , FRBs, SETI)
plar and stellar		1	techn	istructure ologies a				lar	

Prizes for student presentations at the ASM were awarded to the following:

Best student poster

- 1st: Giulia Cinquegrana
- 2nd: Sanja Lazarevic
- 3rd: Natasha Van Bemmel
- People's choice: Natasha Van Bemmel

Best student sparkler

- 1st: Sarah Bradbury
- 2nd: Natasha Van Bemmel
- 3rd: Tommy Marshman
- Honourable mentions: Nicolò Dalmasso, Bailey Martin

Best student talk

- 1st: Benjamin Metha
- 2nd: Madeleine McKenzie
- 3rd: Anthony Carr
- Honourable mentions: Jacob Askew; Lucinda Lilley; Jonah Hansen; Rowina Nathan; Matthew Miles; Kirsten Banks; Madeline Howell

In addition to science sessions, the ASM featured the ASA Prize Talks; ASA Chapter meetings; AAT and ATNF Town Halls; and plenary sessions on ESO-SKA synergies, the Decadal Plan process (hosted by the Chair of National Committee for Astronomy), and ESO engagement (hosted by the Chair of the AAL Board). Training events included sessions on data science and machine learning facilitated by ADACS; outreach and media training by the EPOC chapter; and an SKA data training workshop by the SKA Organisation.

The Harley Wood lecture took place on 5 July and was delivered by Indigenous astronomer Krystal De Napoli. The lecture titled *"Deadly" Dark Skies: Aboriginal and Torres Strait Islander Astronomy* was attended by 180 in-person and 80 online participants.

The organisers ran a post-ASM survey, which showed strong support for starting main scientific program at 11am AEST, hosting the welcome reception on Monday evening instead of Sunday, and having two parallel sessions. Networking opportunities, the conference dinner, and panel discussion plenary sessions were listed as the top three events/aspects of the annual ASA meetings that were categorised as important or very important.

My big thanks to Richard McDermid, Liz Mahony, Jo Dawson, and their LOC and SOC teams for organising a fantastic meeting.

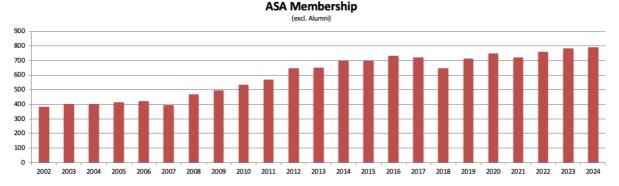
**The Harley Wood School of Astronomy (HWSA)** was held as an in-person event at the Wollongong Surf Leisure Resort from 30 June – 2 July, 2023. 59 participants took part in a program on *"State-of-the-art facilities: What science can you do with them and how?"* HWSA sessions aimed to equip participants with insights into various aspects of modern astronomy, from opportunities provided by the latest optical and radio facilities to proposal writing, data analysis, research funding, and the effective use of supercomputers. My thanks to Kateryna Andrych and the rest of the LOC and SOC for organising a successful school.

The 2023 ANITA Workshop and summer school on Tidal Disruption Events: these were held at Monash University in February 2024. See section 13 below for more information.

## 6. ASA membership

The ASA membership has remained stable over the past 12 months. Membership numbers are now 791 (compared to 784 in mid-2023) - these are all classified as current members but 146 have payments overdue, of whom 45 are more than 18 months overdue (and will be

removed shortly if they remain unfinancial). These numbers are disappointing given several attempts to contact late payers, but not too different to previous years.



One reason for being overdue is students who complete their degrees but never tell us what comes next. Council would be interested to know about the subsequent careers of anyone who leaves astronomy, students or others, and Alumni status (which is free) was created to stay in touch with them. We hope to use alumni stories to better describe possible career paths for astronomers.

We currently have 44 Alumni, but they are <u>not</u> included in the membership count.

On the other hand, the numbers *do* include 14 Corporate members after an effort to get all relevant organisations to sign up for free Corporate membership. There are still several obvious omissions from this list. I encourage all astronomy-active groups to consider Corporate membership of the ASA.

The gender breakdown of individual members is 239 (Female), 520 (Male), 5 (Indeterminate/Intersex/Unspecified), 13 (Prefer not to say). A Table with more details is included below.

	Male	Female	Other	Prefer not to say	Not relevant	Total	Male %	Female %
Honorary Fellow	19	6				25	76	24
Honorary Associate	3					3	100	0
Fellow	52	16		1		69	75	23
Fellow - International	7	2	1	2		12	58	17
Fellow - Retired	25	2				27	93	7
Full Member	184	85	1	8		278	66	31
Full Member - International	44	19				63	70	30
Full Member - Retired	18	2				20	90	10
Student Member	149	97	2	2		250	60	39
Associate Member	19	10		1		30	63	33
Total (individuals)	520	239	4	14	0	777	67	31
Associate Society						0		
Corporate Member					14	14		
Total	520	239	4	14	14	791		
Alumni status	33	11		1		45	73	24

The graphs below show the historical data. The percentage of female members has plateaued at just over 30%.

We note with sadness the passing of two ASA members: Frank Andrews and Vicki Peterson, since the last AGM. Frank was a former president of the Royal Astronomical Society of New Zealand and a dedicated space educator, while Vicki was a long-standing (since 1979) member of the ASA.

## 7. Honorary Fellow

The ASA Council elected Ken Freeman, from the Australian National University, to Honorary Fellowship of the Society. Ken was one of the first to point out the large fraction of dark matter in spiral galaxies; his contributions to this field have been recognised by numerous national and international awards. Ken has also contributed to our community through the ASA, first as a Councillor in 1969, and then as Secretary in 1971-1972. Congratulations to Ken.

## 8. Financial

The ASA finances remain in a healthy position. Our current equity in our operating accounts of ~\$550K corresponds to approx. four years of operating expenses.

In 2023/24, PASA income was about 40% of our overall income with the rest coming from membership fees and bank interest earnings. Last year we had a small surplus of \$665 (see the Treasurer's Report for details). This is down from previous years when we had average surpluses of >\$30K.

The decrease in our surplus is due to the decision to freeze membership fees over the past four years, combined with increased expenditure in various areas:

- Increase in student support
- Increase in payments to PASA Editorial Board
- Promotion of ASA Prizes

Given the current financial situation of the Society, the ASA Council has agreed to again keep the membership fees frozen for 2024/2025.

The Foundation for the Advancement of Astronomy has \$249,194 as of 31 Mar 2024. This charitable Foundation supports all the ASA Prizes. Donations are tax deductible.

## 9. Publications of the ASA (PASA)

PASA has continued to see an increased volume of submissions. The 2022 Impact Factor of 6.3 is similar to the previous year, despite changes in IF methodology. PASA's IF remains on par with or higher than MNRAS, ApJ, AJ, and A&A and many others (albeit with a lower volume of papers). Australian radio astronomy papers continue to largely drive PASA's surge in citations, with ASKAP and MWA related papers contributing most prominently. The volume of submissions has increased significantly in the past 12 months, possibly driven by the move of MNRAS to Open Access. PASA itself it on track to flip to Open Access in 2025, following extensive consultation with the community which commenced at last year's ASM. I thank PASA Editor-in-Chief Ivo Seitenzahl for his leadership of the journal during this transition, and particularly for the engaging the ASA community (which comprises a large fraction of PASA authorship) in the process.

There will be a change in PASA leadership, with Minh Huynh stepping up from the Deputy role to Editor-in-Chief in January 2025. Later this year there will be a call for applications for Associate Editor positions, and I encourage all interested members of the ASA to consider this opportunity.

We remind members that all PASA reviewers are eligible for a 30% discount on Cambridge University Press books.

#### 10. ASA Prizes and awards

The following prizes have been awarded during the 2024 Annual Scientific Meeting (ASM).

# Bok Prize for outstanding research in astronomy by an Honours or eligible Masters student

Awarded to Sophie Young for her Honours thesis: "Free-free absorption in young radio galaxies". Sophie completed her Honours thesis at the University of Tasmania, supervised by Stas Shabala and Ross Turner.

In addition, Tamsyn O'Beirne (UWA) was Highly Commended for her Masters thesis "Exploring the Dark and Low Surface Brightness Universe with WALLABY" supervised by Lister Staveley-Smith, Tobias Westmeier and Ivy Wong.

#### Charlene Heisler Prize for the most outstanding PhD thesis in astronomy

Awarded to Shyam Menon (ANU, now at Rutgers University, USA) for his thesis "The interplay of star formation and radiation feedback in the interstellar medium" supervised by Christoph Federrath.

In addition, Yaguang Li (University of Sydney, now at University of Hawaii) was Highly Commended for his thesis "Developing tools for probing stellar interiors with asteroseismology" supervised by Tim Bedding.

## Louise Webster Prize for outstanding research by a scientist early in their post-doctoral career

Awarded to Andrew Zic (CSIRO) for the paper 'The Parkes Pulsar Timing Array third data release' Zic, et. al. PASA (2023), 1-15

In addition, Dr Sabine Bellstedt (UWA) was Highly Commended for the paper 'Galaxy and Mass Assembly (GAMA): a forensic SED reconstruction of the cosmic star formation history and metallicity evolution by galaxy type' MNRAS 498, 5581 (2020).

#### Anne Green Prize for outstanding research by a mid-career researcher

This year we have two joint winners:

- Christoph Federrath (ANU) for his work on star formation: theory and computation
- Aaron Robotham (UWA) for his development of the ProTools suite of advanced analysis tools

# Emerging Leaders in Astronomy Software Development Prize (sponsored by the Australian Research Data Commons)

Awarded to Dr Kate Harborne (UWA) for SimSpin, a software package that allows users to take galaxies output from theoretical simulations and produce a "mock" observation using an integral field spectrograph (IFS).

#### **David Allen Prize**

Awarded to Dr Sara Webb (Swinburne) for an impressive outreach presence, covering topics such as Dark Matter, Dark Energy, Women in Astronomy and Mysteries of the Universe, across numerous platforms, with a particular focus on educating young people via a diversity of outreach activities.

## Berenice and Arthur Page Medal for scientific contributions by an amateur astronomer that has served to advance astronomy

Awarded to Mr Rod Stubbings for 400,000 variable star observations, specifically cataclysmic variables and dwarf novae, and his work in detecting rare outbursts and contributing to the reclassification of specific short period variable stars. Rod is a retired plumber who observes 300 stars per night.

#### **Ellery Lectureship**

Awarded to Prof Matthew Colless (RSAA) for leading the pioneering large redshift and peculiar velocity surveys of galaxies to understand their evolution and the large-scale structures they form, and to measure cosmological parameters.

The ASA has again engaged Science in Public to help promote the ASM and the Prizes.

The ASA Prizes and Awards Co-ordinator Tanya Hill collates gender and geographical statistics for ASA prizes to ensure that there is a good balance. For the 2024 prizes, the gender statistics are shown in the table below.

	Bok Prize	Heisler Prize	Webster Prize	Green Prize	Software
Total nominations	5	9	4	3	2
% female nominations	60%	11%	25%	33%	50%
% female short-list	100%	0%	25%	33%	50%
Gender of winner	F	М	Μ	M x 2	F

The Society expects that female candidates should comprise at least 30% (increased from previous expectations of 20%) of the nominations for each prize and encourages institutions to help achieve this goal. This figure matches the percentage of female members in the ASA. The percentage of female nominations is variable because of the relatively small total number of applicants, but the statistics over recent years are as follows:

Prize	2024	2023	2022	2021	2020	2019	2018	2017	2016	2015	2014
Bok	60%	18%	67%	46%	37.5%	61%	0%	29%	50%	83%	50%
Heisler	11%	38%	42%	18%	45%	38%	44%	43%	25%	40%	33%
Webster	25%	50%	50%	80%	50%	50%	100%	0%	0%	100%	33%
Green	33%	29%	33%	29%	40%	40%	50%				
Software	50%	25%									

Percentage of Female Applicants: female membership of the ASA is 30%

Many thanks to Tanya Hill for her oversight of the process, and to all of the judges of the awards.

#### 11. Inclusion, Diversity and Equity in Astronomy (IDEA) Chapter

The IDEA Chapter has 268 members, and is chaired by Devika Kamath. The Chapter members identify as 57% female, 40% male, 1% intersex/undefined, 1% prefer not to say. The Chapter steering committee is well represented across all states and territories with active astronomy groups; my thanks to those members of the steering committee who have put themselves forward to make this possible.

The Chapter's main work in the last year has been the biennial Pleiades Awards, which were announced at the 2023 ASM. These represent a large amount of work from everyone involved, both the submitting institutions and the assessment panel – thanks to all who contributed. The IDEA Chapter also hosted a neurodiversity and inclusion training session at the 2024 HWSA.

The main activities for the next 12 months will be the review of the Pleiades process, and call for applications (and subsequent assessment) in time for the 2025 ASM.

#### 12. Education and Public Outreach Chapter (EPOC)

Jackie Bondell is Chair of EPOC, which has 238 members. Chapter members identify as 59% male, 37% female, 6% PNTS, 1% indeterminate/intersex/unspecified.

In conjunction with ASTRO3D and OzGrav, EPOC have been working on a new 'Careers in Astronomy' brochure. The final draft is now complete, and will be shared with teachers at the National Science Teachers Conference in early July.

An outreach workshop for members was run as part of the 2023 ASA meeting at Macquarie, and an EPOC in-person workshop is planned for early 2025. The Chapter has also taken on a proposal to consider options for providing small grants to support member's outreach goals. EPOC members are active in the new Eclipse Working Group (section 20).

#### 13. Australian National Institute for Theoretical Astrophysics (ANITA)

Fiona Panther is Chair of ANITA, which has 236 members (66% male, 30% female, 4% other or prefer not so say). Students comprise 42% of members.

ANITA's main activity was the 2024 annual workshop, which took place at Monash University from Feb 7-9, with talks shared via zoom for remote participants over three days. 36 talks were delivered over the three days, including from international participants. 65 people registered for the conference, 43% of whom were students. Talks were allocated 15 minutes each, and as usual talks for ECRs were prioritized. Once again the organizers decided to withhold talk titles and ensure talk themes were somewhat randomized throughout the three days. This has mostly (although not uniformly) been welcomed by attendees. Megha Sharma (Monash) was awarded the 2024 J-P Macquart prize for best student talk, which came with a \$100 gift certificate. The ANITA workshop exit survey received mostly positive feedback, with a number of constructive comments including related to the decision to withhold talk titles. The workshop was preceded by the ANITA summer school on tidal disruption events, also held at Monash. Thanks to all those who have made the workshop and summer school possible, particularly the organisers led by Daniel Price and Evgeni Grishin, and sponsors including OzGrav and

Ilya Mandel. The 2025 workshop and summer school will be held at the Australian National University.

## 14. Early Career Research Chapter (ECR)

Amit Seta took over from Henry Zovaro as Chair of the ECR Chapter in May 2024. The Chapter has 330 members, 59% male and 39% female, 2% prefer not to say.

The ECR Chapter continued their successful symposium series, consisting of a series of 2-3 day visits by ECRs to various astronomical institutions around Australia, where they give a colloquium-length talk that is typically broadcast via Zoom to ASA members around the country. 25 speakers and 8 host institutions participated in the program this year, with OzGrav providing some additional sponsorship.

The "Astronomers in Industry" list maintained on the ASA ECR Chapter webpage has been revived and updated. It contains new and updated information from ex-members of the astronomy community who have now moved to non-academic career paths. This process has almost doubled the number of individuals in the database to 80. These individuals have been contacted and asked for permission to pass on their contact information to ECRs interested in asking for their advice. The Chapter will hold an Industry Engagement Session at the ASM on Thursday morning; this will involve a panel discussion from several ex-astronomers now in industry who will talk about their careers and have an audience Q&A.

Together with ASTRO3D and Dark Matter Centres of Excellence the ECR Chapter hosted a speed meet-a-mentor event on 20 June 2024.

The Emerging Leaders in Software Development Prize is in its second year, with this year's winner Kate Harborne being recognised during the ASM's hub day Prize session.

#### 15. Group for Astroparticle Physics Chapter (GAP)

The GAP Chapter, shared between the ASA and the Australian Institute of Physics (AIP), is co-chaired by Mark Krumholz. The co-Chair from the AIP is Martin White, who succeeded Celine Boehm in May 2024. The Chapter has 94 ASA members, an approximately 10% increase since last year. Membership is approximately 15% senior people (fellows and retired), 40% members, and 45% students. Gender breakdown is close to even among the students, but skews increasingly male with seniority, reflecting the field overall; the gender balance is probably slightly worse than is typical for astronomy, but more typical of physics. There are members from every state and territory except the NT, and from >10 Australian universities, as well as from multiple non-university research institutes (e.g., CSIRO, Manly Astrophysics).

The GAP ran an all-day parallel session at the 2023 AIP Congress at the ANU, jointly with the ASA. The session had roughly 40 attendees. The GAP is helping to plan the December 2024 AIP summer congress in Melbourne, and on GAP's advice GAP member Tamara Davis has been invited as one of the plenary speakers. GAP maintains an active slack channel as part of the ASA slack domain. A website was also established at https://www.aip.org.au/Group-for-Astroparticle-Physics-(GAP).

#### 16. Time Domain Astronomy (TDA) Chapter

First elections for the TDA steering committee were held in November 2023. The committee is chaired by Ben Montet. The Chapter has 85 members, comprising of 58% male, 38% female, 4% other/unspecified, and has representation from every state.

This year has focused on development of the chapter and determining the places where it can make the largest impact in the community. The largest TDA Chapter related event so far has been the "Transients Down Under" conference at Swinburne in Jan-Feb 2024. The steering committee are currently undertaking a survey of the community and making plans to build a series of events through the rest of 2024 and 2025. The primary focus is on community development, building opportunities for people who would normally not interact to meet and discuss science, and to provide chances to increase the visibility of HDR students and ECRs.

## 17. Sustainability Working Group (SWG)

The SWG is co-chaired by Themiya Nanayakkara and Clancy James. The main activity since the 2023 AGM has been to assist with organising the 2024 ASM, the format of which aligns with the goals of the SWG.

#### 18. Communications Working Group

The ASA Communications Working Group (CWG), chaired by Vanessa Moss, has been working to update communication channels with ASA members. A major aspect of this has been setting up and overseeing the usage of an ASA Slack space. The CWG's main focus in recent months has been the 2024 ASM. The CWG has also facilitated communications related to the current Decadal Plan process, via the ASA Slack.

#### 19. Designated Observatories

The ASA has been requested by Standards Australia to maintain a list of *designated* optical observatories that are judged to be valuable resources for (i) research, (ii) education and (iii) community use. Acceptance as a designated observatory does not imply any form of legal status, but it should enhance a case for protection against obtrusive lighting. There have been no new additions to the designated observatories list in the past 12 months.

## 20. Upcoming Eclipses and Eclipse Working Group

April 2023 saw the first of five total solar eclipses that will be visible in Australia over the next 15 years. The ASA have set up a website to inform the public about eclipses and to encourage safe ways of viewing them. We are forming an Eclipse Working Group to liase with the various stakeholders, such as Government authorities, ARPANSA, the RANZCO etc., and to promote safe viewing of the eclipse by everyone who is interested. At the moment the EWG consists of John Lattanzio (Chair) and Terry Cuttle (Co-chair). Terry is also a member of the IAU Eclipse Working Group and was awarded a certificate of appreciation from the ASA last year for his assistance. This group will be expanded and finalised soon, and then be active in the next few years.

#### 21. Correspondence

The ASA email list remains the primary communication avenue for ASA news. Members can post directly to the list at asa@mailman.sydney.edu.au. This list is also used for Communications from the ASA Council to members regarding items of broad interest.

The ASA President has hosted regular Heads of Astronomy meetings at an approximately two-monthly cadence. In addition to discussing ASA business, these have provided good opportunities to ensure the flow of relevant national-level information within our community. My thank to my predecessor, John Lattanzio, for instituting this initiative.

The new ASA Media and Outreach Co-ordinator, Vanessa Moss, has also set up an ASA Slack channel, which has been used extensively at the last two ASMs.

The Society has been active in advocating for astronomy through various submissions. Some of these are listed below.

- The ASA and the AIP made a joint second submission to the National Science and Research Priorities process. Using examples from astronomy and physics, we highlighted the crucial role of fundamental sciences, and advocated for explicit inclusion of fundamental research as one of the Priorities. These messages are consistent with our submission to the first round of consultation some months ago, and have been further amplified by organisations such as Science and Technology Australia (STA). We hope for a similarly positive outcome to the recent <u>NSW curriculum review</u>, which was revised to include astronomy content following strong representations from astronomy allies including the <u>ASA and AIP</u>.
- The ASA, AIP and RACI wrote a joint letter to the Minister for Education regarding <u>ARC board appointments</u>. We highlighted the need for active researchers (including at universities) to be on the ARC board, and were happy to see the restrictions relaxed shortly after our submission.
- The ASA provided feedback on National Competitive Grants Program (NCGP), highlighting the importance of ARC in funding basic research, and advising against aligning ARC funding to government priorities.

These documents are available on the ASA Public Document Archive.

## 22. Science & Technology Australia

The ASA is a member of Science & Technology Australia (STA), which is Australia's peak body across Science and Technology. ASA members attended major STA events in the past year, including the annual *Science Meets Parliament* and have participated in STA programs such as the post-budget briefing.

The ASA was well represented at the 2024 Science Meets Parliament by:

- Ashley Ruiter (UNSW Canberra)
- Sarah Brough (UNSW Sydney)
- Manisha Caleb (University of Sydney)
- Danny Price (SKAO)

#### 23. National Committee for Astronomy

The ASA President is an ex-officio member of the NCA, which continues to be active in many areas.

The main NCA activity over the past 12 months has been the Decadal Plan for Australian Astronomy (2026-2035). It has been great to see the ASA community engage strongly with this process, by leading and contributing to just about every Working Group. ASA communication channels will be used to inform and engage the community further over the coming months.

The NCA has also been involved with work on the ESO bid (with community engagement led by AAL, below), and co-hosted (with the ASA) a town hall to help with coordination for the next ARC Centre of Excellence bids.

#### 24. European Southern Observatory

The 10-year Strategic Partnership between Australia and ESO will finish in 2027. The community's intention, as outlined in the Decadal Plan (2016-2025), is for a bid for Full

Membership following the conclusion of this partnership. Any such bid would have to be formally led by the Department of Industry, Science and Resources (DISR). To this end, DISR have formed the ESO Coordinating Group (ESO-CG); the group includes members from various Australian astronomy organisations as well as DISR. The ASA President is an exofficio member of this group.

Opportunities and challenges around the ESO membership bid were discussed at the 2023 ASM. The past year has seen the astronomy community, led by AAL, make progress in putting together relevant information for a potential bid. Given the large request (very approximately \$500M over 10 years), benefits well beyond scientific will need to be demonstrated. DISR have recently released an <u>ACIL Allen report on the benefits of the strategic partnership;</u> this contains some positive information, despite the definition of benefits being rather narrow, and provides potential pathways for further investigation. The ASA will continue working will all other relevant Australian astronomy organisations to ensure that the community can put forward the most comprehensive and accurate view of the broad benefits to Australia of ESO membership.

## 25. Astronomy Australia Limited

In mid-2023, AAL received news as to the outcome of the "Stage 2" NCRIS funding round (set to run between 2023-2027). AAL applied for \$46M over four years, submitting a prioritised list of 11 proposals for Stage 2. Overall, AAL was granted \$12.75M, and the 'gap' projects which AAL prioritised were funded. These were the projects that were not fully funded via the 'Stage 1' NCRIS funding round, and included ADACS, Astralis, ASKAP infrastructure maintenance, and MWA operations uplift. The projects that did not receive funding this time may be eligible to submit for future rounds – the Department of Education has a total of \$850M to allocate to NCRIS capabilities between 2024-28.

There will be a change in AAL leadership, with Mark McAuley finishing as CEO within the next nine months. Mark will remain in his current role until a new CEO has been appointed, and if required, an appropriate period of transition has taken place.

AAL has developed a new series of semi-regular astronomy and gravitational wave commercialisation workshops, which bring researchers, industry and government together to find ways to increase the commercial benefit from technology and IP rich fields of research.

In other Industry Engagement news, AAL <u>published a new case study</u> involving a project between a team at Australian Astronomical Optics (AAO) at Macquarie University (led by Associate Professor Lee Spitler) and industry partner Advanced Navigation. Advanced Navigation were recently awarded a \$5.2M *Moon to Mars Initiative: Demonstrator Mission Grant* by the Australian Space Agency, to deliver a sensor called LUNA (Laser measurement Unit for Navigational Aid) to US-based space systems company, Intuitive Machines, as part of NASA's ongoing Commercial Lunar Payload Services program. Intuitive Machines will mount LUNA onboard its Nova-C lander. The LUNA sensor, using AAO's focused multi-beam optical laser device (known as a collimator), will eventually allow a lander to safely touch down on the moon without any real-time assistance from mission control.

#### 26. New Priorities and Planned Activities for 2023/2024

In 2023, Council identified the following priorities, which are still current:

- Conduct a survey of the Membership to see how we can best assist members, maximize benefits of the ASM to membership, including students, and to seek ideas on how to effectively use the Society's finances
- Work with the IDEA Chapter to assist all institutions to reach at least Bronze Pleiades
  level

- Work with the IDEA Chapter to investigate avenues for accepting anonymous reporting of issues
- Initiate the next stage of the ASA History project
- Assist with securing Australia's role and use of international facilities and partnerships
- Manage PASA so that it remains an excellent option for ASA members in a rapidly changing environment
- Update instructions for the ASM and HWSA in view of the inclusion of online delivery modes
- Update the Astronomy Australia website

As covered elsewhere in this report, progress is being achieved against most of these, with the exception of the website updates. We expect the membership survey to take place in the second half of 2024, the delay being due to the Decadal Plan survey process and the desire to avoid survey fatigue by ASA members. Two historical papers are being prepared to add to those already published as part of the ASA History project (linked from https://asa.astronomy.org.au/about-2/the-society-and-council/).

## 27. Harley Wood School of Astronomy and ASM/AGM 2025

The 2025 ASM and HWSA will be organised by the University of Adelaide, and held in a hybrid in-person and online format. Thanks to Gavin Rowell and colleagues for hosting our community. I look forward to seeing how the experience of this year's online-first ASM shapes the 2025 meeting.

## 28. ASA Council for 2023-2024

The Council for the next year will be:

Stas Shabala	President
Ashley Ruiter	Vice President
John Lattanzio	Immediate Past President
John O'Byrne	Secretary
Marc Duldig	Secretary
Yeshe Fenner	Treasurer
Christophe Federrath	Councillor
Richard McDermid	Councillor
Bernhard Mueller	Councillor
Sarah Pearce	Councillor
Ivy Wong	Councillor
Vacant	Student Representative
Ivo Seitenzahl (in 2024)	Chair, PASA Editorial Board
Minh Huynh (in 2025)	Chair, PASA Editorial Board
Tanya Hill (Co-opted)	Prizes and Awards Co-ordinator
Vanessa Moss (Co-opted)	Media and Outreach Co-ordinator

Thanks to Pradosh Barun Das as the outgoing student representative on Council.

Our long-standing Secretary Marc Duldig has announced plans to step down at the 2025 ASM after 40 years (!) of service to the Society. The Council has approved Katrina Sealey (a former ASA Treasurer) to shadow Marc, beginning after the 2024 ASM, with a view to be the Council nominee for the Secretary position in the ballot prior to the 2025 AGM.

### 29. Closing Remarks

The ASA ASM is an annual reminder of how connected the Australian astronomy community is, something that we all probably appreciate just that little more post-COVID. Our Society has come through COVID in good financial shape, and has looked to continue supporting our members. The ASA Chapters continue to drive much of this work, with a seemingly endless stream of initiatives. Indeed, some initiatives even include formation of new Chapters, Time Domain Astronomy being our latest one.

Our Society's journal, PASA, has again maintained its status as a top-tier journal this year, with support from ASA membership. PASA continues to provide a healthy financial return to the Society. I look forward to PASA's increased impact thanks to its wider readership, enabled by a switch to Open Access publishing in 2025.

Continuing astronomy's proud tradition of innovation, this year's ASM is our inaugural onlinefirst meeting. I am confident that the hybrid component of our next in-person ASM, in Adelaide in 2025, will greatly benefit from this year's meeting.

The next 12 months will see finalisation of the next Decadal Plan for Australian astronomy based on extensive consultation this year, and the simultaneous development of the ESO membership bid. I look forward to seeing our community come together once again in these and other endeavours.

As always, all progress is only possible thanks to the people who do the work. I encourage all ASA members who have always wondered about joining an ASA Chapter steering committee, but never quite got there, to just give it a go. To those who have taken the plunge already, thank you.

Shabala

A/Professor Stas Shabala President