

SCAR AAA and its objectives



John Storey, Chief Officer, AAA

Image: Craig Kulesa



Work program

Our two tasks for this weekend:

- Write the astronomy & astrophysics submission to the “*Practical Guide to Enabling the 20-Year Antarctic Science*” roadmap.
- Decide how SCAR AAA should evolve over the next four years.



What is SCAR?

The Scientific Committee on Antarctic Research

- SCAR is an ICSU body (like the IAU)
- In fact, the IAU is a “union member” of SCAR
- SCAR was formed in 1958
- SCAR has:
 - 31 full members
 - 9 union members
 - 6 associate members

SCAR is registered as a Company and a Charity in the UK

Scientific Research Programs

- Astronomy and Astrophysics from Antarctica (AAA)
- State of the Antarctic Ecosystem (AntEco)
- Antarctic Thresholds - Ecosystem Resilience and Adaptation (AnT-ERA)
- Antarctic Climate Change in the 21st Century (AntClim21; formerly PACE)
- Past Antarctic Ice Sheet Dynamics (PAIS)
- Solid Earth Responses and influences on Cryospheric Evolution (SERCE)

Astronomy & Astrophysics from Antarctica Scientific Research Programme

Steering Committee:

- Lyu Abe (France)
- Jenny Adams (NZ)
- Michael Ashley (Australia)
- Jennifer Cooper (USA/APECS)
- Xiangqun Cui (China)
- Takashi Ichikawa (Japan)
- Albrecht Karle (USA)
- Silvia Masi (Italy)
- Anna Moore (USA)
- John Storey (Australia – Chief Officer)
- Charling Tao (France/China)
- Lifan Wang (China/USA)

Astronomy & Astrophysics from Antarctica Scientific Research Programme

Four “Themes”

- A. Site testing, validation and data archiving.
 - Tony Travouillon
 - Jon Lawrence
- B. Arctic site testing.
 - Eric Steinbring
 - Ming-Tan Chen
- C. Science goals.
 - Michael Burton
 - Zak Staniszewski
- D. Major new facilities.
 - Peter Tuthill
 - Xuefei Gong



Scientific Committee on Antarctic Research **Astronomy & Astrophysics from Antarctica (AAA)**

Timeline:

- 2006 Planning Group proposed; Hobart, Australia
- 2008 AAA SRP approved; Moscow, Russia
- 2009 First Planning Group meeting; Frascati, Italy
- 2009 Second Planning Group meeting; Rio de Janeiro, Brazil
- 2010 Business meeting of AAA SRP; Buenos Aires, Argentina
- 2011 Kick-off workshop; Sydney, Australia
- 2012 Business meeting; Portland, Oregon
- 2013 Second workshop; Certosa di Pontignano Siena, Italy
- 2014 Business meeting; Auckland, New Zealand
- 2015 This meeting; Volcano, Hawaii**
- 2016 Business meeting; Kuala Lumpur, Malaysia
- 2017 Fourth workshop; where?



AAA Kick-off meeting

Sydney, 29 June – 1 July 2011

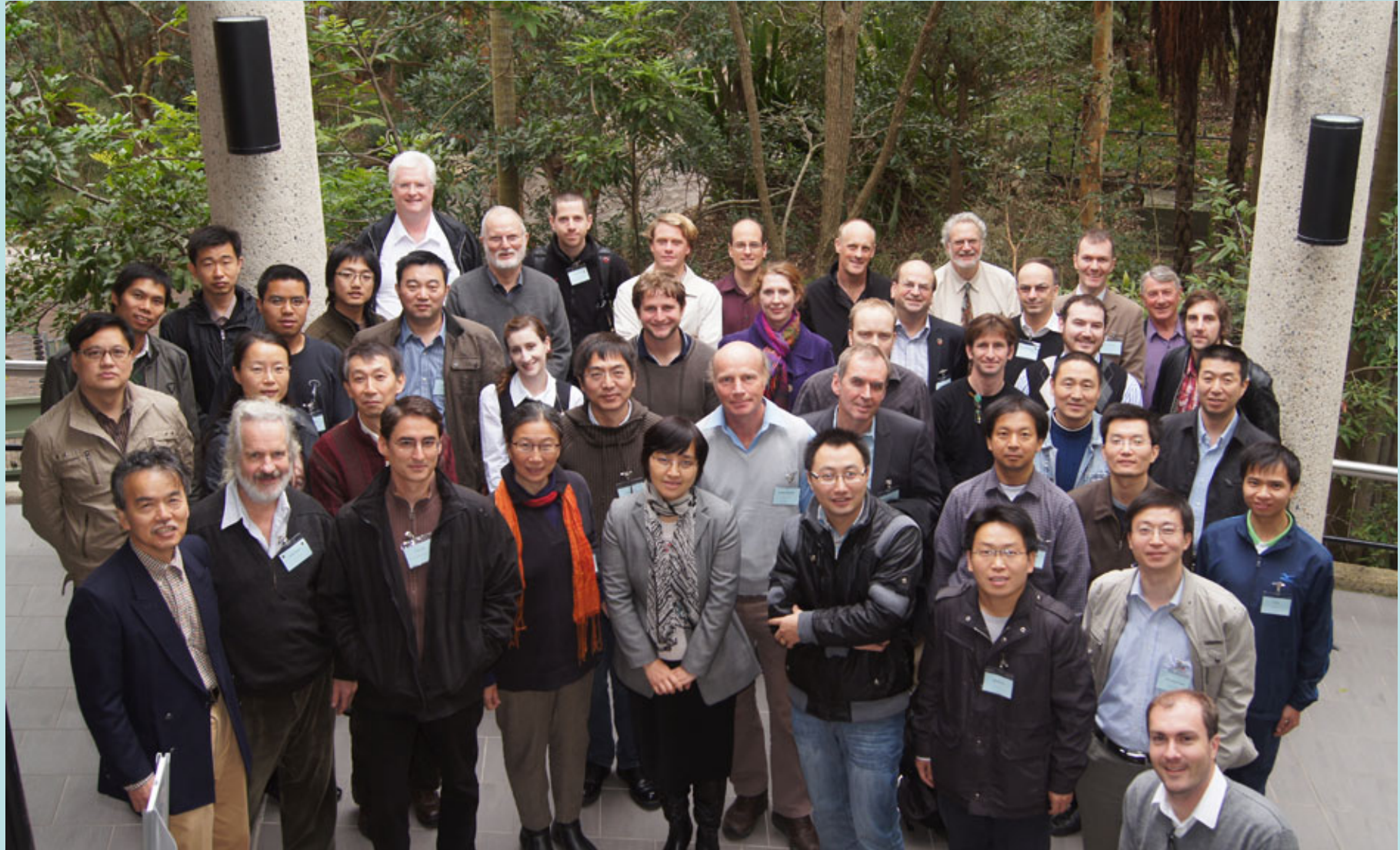


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Image: Brian Corey, MIT

AAA Kick-off meeting, 2011, Sydney



AAA Kick-off meeting, 2011, Sydney



AAA Kick-off meeting, 2011, Sydney



AAA Second workshop, Siena, 2013







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First SCAR Antarctic and Southern Ocean Science Horizon Scan



“A roadmap for Antarctic and Southern Ocean Science for the next two decades and beyond”



Horizon Scan questions

- *Question 69:* What happened in the first second after the Universe began?
- *Question 70:* What is the nature of the dark Universe and how is it affecting us?
- *Question 47:* How do subglacial systems inform models for the development of life on Earth and elsewhere?



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Challenges

(from Portland, 2012)

- Closer engagement with astro-particle physics community
- Development of web portal and data archiving
- Improved coordination of projects with similar goals (eg AST3, ASTEP400, TwinCam)
- Improved priority setting on major projects
- Increased attendance at SCAR OSC

External Review, 2014

Recommendations:

- Formulate a clear vision, with informative advice, on what type of observations are needed where,
- Encourage collaboration by all countries towards new accomplishments, not repetition of existing results,
- Extend the site-testing database to cover astronomical data, including consideration of joining the Astronomical Virtual Observatory,
- Increase education/outreach, especially to general public, colleges, high schools, museums,
- Build more capacity in countries with less developed Antarctic astronomy programs.



Three goals to emerge from Auckland, 2014:

1. Create an Antarctic Plateau International Astronomical Observatory (APIAO),
2. Extend the current site testing searchable database to become a data portal,
3. Increase outreach activities directed towards the general public and the international astronomical community, especially in those countries with less developed astronomical programs in Antarctica.





Some other suggestions are as follows:

- Bi-annual workshop (in place)
- Travel grants to attend meetings (in place)
- Promotion of your project/results
- Logistical help such as getting your instrument to Antarctica or moving your instrument from one base to another
- Thesis awards/competition
- How to apply for funding of your project
- Database of Antarctic researchers and area



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Which means:

- *Please include one slide, describing what SCAR AAA can do for you,*
- *Discuss the future SCAR AAA with your colleagues,*
- *Stick around on Monday and contribute to the report!*

Enjoy the meeting!



Image: Craig Kulesa