



# How institutions can help women in astronomy

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## Why institutions?

- Why do institutions need to take action to address the difficulties faced by women in astronomy?
- This is not rocket science (let alone astrophysics!):
  - The problems women face are largely due to structural & cultural problems within institutions, and so the solutions largely require institutions to change their structures and cultures.
- The AAO provides examples of both the problems and some tentative steps towards solutions...



# Staff demographics

- At present, less than a quarter of the AAO's staff is female.
- However the fraction of female staff has improved from 14% to 24% over the last ~5 years.
- The biggest improvement has been in the astronomy staff, from 0% to 44%! (n.b. overall growth; no permanent staff)
- A major challenge remains in the technical staff, where the fraction has only improved from 8% to 9%.

Sep 2012	Females	Males	Total
Astronomy	7	9	16
Technical	6	58	64
Administration	10	5	15
<b>Total</b>	<b>23</b>	<b>72</b>	<b>95</b>

Jan 2012	Females	Males	Total
Astronomy	6	8	14
Technical	5	59	64
Administration	10	4	14
<b>Total</b>	<b>21</b>	<b>71</b>	<b>92</b>

Jan 2011	Females	Males	Total
Astronomy	4	10	14
Technical	3	56	59
Administration	8	4	12
<b>Total</b>	<b>15</b>	<b>70</b>	<b>85</b>

Jan 2010	Females	Males	Total
Astronomy	2	11	13
Technical	2	53	55
Administration	7	5	12
<b>Total</b>	<b>11</b>	<b>69</b>	<b>80</b>

Jan 2009	Females	Males	Total
Astronomy	0	9	9
Technical	5	55	60
Administration	6	4	10
<b>Total</b>	<b>11</b>	<b>68</b>	<b>79</b>



## General considerations

- Philosophical approach – enlightened pragmatism.
  - We want to see all our staff reach their full potential – this is good for both individuals and institutions.
  - We are empirical scientists, so we are trying a variety of ideas and seeing what works.
- Care needed – these are people's careers & lives.
  - Isn't it strange? These 'experiments on human subjects' don't need approval from an Ethics Committee!
  - So apply the 'Hippocratic principle' – first, do no harm.
  - This means giving thought to unintended consequences and, in particular, avoiding disadvantaging other people.



## AAO initiatives

- Offer and advertise flexible working conditions
- Seek out potential female candidates for jobs
- Deal with potential biases on job selection panels
- Provide professional development coaching
- Encourage staff to participate in mentoring programs
- Re-engineer work practices around core hours
- Offer return-to-work scholarships for primary carers
- Nominate women for awards/prizes/opportunities



## Flexible working conditions

- AAO offers flexibility on terms, hours and duties:
  - 6 staff work part-time or variable hours at their request
  - (5 staff are in joint AAO/university positions; 6 retired staff are in casual, consultant or honorary roles)
  - Duties can be adjusted depending on circumstances (e.g. caring for kids) – but this is an instance where one has to be careful about not disadvantaging other staff.
  - Our practice is better than we let on! AAO has not emphasised this flexibility sufficiently in advertising – this has been a missed opportunity.



## Staff searches

- How can you ensure strong participation by women in applying for job opportunities at your institution?
- Again, not rocket science – actively seek out and encourage female applicants:
  - Specifically encourage eligible women already on staff.
  - Seek and encourage good external candidates (ask around)
  - Ask female staff (those not applying themselves!) for suggestions and encourage them to recruit good candidates.
  - And when you have good female candidates, appoint some!
  - Snowball effect – success breeds success, and a reputation as a supportive workplace helps recruiting.



## Dealing with bias

- General staff training on conscious and unconscious gender bias in hiring and the workplace generally.
- Perhaps the most critical (though not the only) place to deal with this is in the process of hiring new staff:
  - Ensure selection panels have reasonable gender balance, ideally for both internal and external members of panel (sorry, but while women are under-represented on staff, they will be on more than their fair share of panels).
  - Discuss such biases at start of selection panel meetings – amazing what a difference a simple reminder can make!
  - Review process at end of selection panel meetings to check the process and suggest improvements.



## Development coaching

- AAO hired Nicole McKenna (an executive coach and a speaker at last year's WiA workshop) to provide development coaching for AAO's female astronomers
  - Generic career/life advice from a professional source
  - Independent, experienced and objective observer
  - Needs supplementing by mentoring for (at least) the strictly astronomical aspects of careers
- Most organisations offer a variety of training and coaching programs – actively explore the opportunities at your institution and see what works for you.



## Mentoring programs

- Mentoring programs are becoming more common:
  - e.g. ASA speed-meet-a-mentor, CAASTRO mentoring program, AAO/DIISRTE's staff development programs;
  - there is usually some level of mentoring available via the standard 'performance planning and appraisal' mechanism that most institutions operate.
- Women (and men) should be actively encouraged to participate in one or more mentoring programs:
  - both as mentees and mentors (can be both at once);
  - can be helpful to have female mentors for female mentees;
  - but it's not essential – senior women are rare (that's the problem!) and there are plenty of supportive men;
  - no such thing as 'too many mentors'!



# Development planning

[myidp.sciencecareers.org](http://myidp.sciencecareers.org)

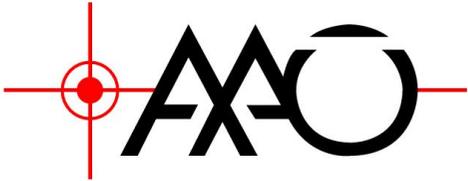
Consider trying out this new tool for individual development planning (IDP) provided on the AAAS Science Careers website

The screenshot shows a web browser window displaying the 'myIDP' (Individual Development Plan) overview page on the AAAS Science Careers website. The browser's address bar shows the URL <http://myidp.sciencecareers.org/Overview/Summary>. The page features a navigation menu on the left with categories: Overview, Assessment, Career Exploration, Set Goals, and Implement Plan. The main content area is titled 'Individual Development Plan Overview' and includes a 'Next Step' button. It defines an IDP as a structured planning tool and lists its purposes: identifying long-term career goals, improving skills, setting goals for efficiency and productivity, and structuring conversations with mentors. A central diagram illustrates a four-step process: 1. Self-assessment (Consider your skills, values, and interests), 2. Career exploration (Learn about career options for PhD-level scientists, and compare your skills, interests, and values to each option), 3. Set goals (Make a concrete plan for how you will improve your skills, build your network, and get the experience you need to prepare for your future career), and 4. Implement plan (Recruit mentors to help with various parts of your plan). Each step is connected to a central 'Your own IDP' document icon by a red arrow, with 'Submit' buttons indicating the flow between steps.



## Common working hours

- Apply the concept of ‘common working hours’ – the period of the day when all staff can reasonably be expected to be at work (e.g. within school hours).
- Re-engineer business practices so that all important common activities (key meetings, seminars etc.) are scheduled within these common working hours:
  - minimises disadvantage to staff with kids or who have other time-frame constraints;
  - maximise advantage to institutions by involving as many staff as possible in key joint activities;
  - usually fairly simple to implement and cost-neutral.



## Return-to-work support

- AAO offers a discretionary award to assist staff return to work after extended absence as a primary carer:
  - Available to any AAO staff member within 18 months of returning to work after 18 weeks or more leave as primary carer for a newborn child, sick relative or an aged parent.
  - Open to all, but preference given to female researchers.
  - \$35k available each year to support qualifying activities.
  - Qualifying activities include: hire of a research assistant; paying for observing support relief; hosting workshops; going on sabbatical; conference and travel support; hosting visiting scientists; costs of family travel to conferences and sabbatical locations; and childcare or nanny costs.



## Awards & opportunities

- Nominate women for awards/prizes/opportunities:
  - Things available to all astronomers (fellowships, prizes, awards, invited talks, SOCs, refereeing, etc.)
  - Things specifically for women (e.g. L'Oreal Awards, Annie Jump Cannon prize, etc.)
  - Broader career opportunities (public speaking, meeting visiting delegations, committees, working groups, etc.)
  - Public and political opportunities (outreach, Science meets Parliament, public speaking, meeting visiting delegations, review and funding committees, etc.)
- As with so much of this advice, it's mainly just being pro-active about doing the obvious things!



## How to make it happen

- How do you champion innovative ideas?
- How do you turn ideas into practice?
- How do you successfully implement change?
  
- Find sponsors for ideas within institution's hierarchy.
- Make a win-win case for individuals and institution.
- Minimise cost (cost-neutral is best!) or demonstrate a cost-benefit gain (benefit can be non-financial).
- This is politics, so you need to gain broad support.
- Be active, be persistent!