



Athena SWAN Bronze department award application

Name of university: University of Hertfordshire

Department: School of Physics, Astronomy and Mathematics

Date of application: 26th November 2014

Date of university Bronze SWAN award: application submitted November 2014

Contact for application: Professor Sean Ryan

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<http://www.herts.ac.uk/apply/schools-of-study/physics-astronomy-and-mathematics>

Athena SWAN **Bronze Department** awards recognise that in addition to university-wide policies the department is working to promote gender equality and to address challenges particular to the discipline.

Not all institutions use the term 'department' and there are many equivalent academic groupings with different names, sizes and compositions. The definition of a 'department' for SWAN purposes can be found on the Athena SWAN website. If in doubt, contact the Athena SWAN Officer well in advance to check eligibility.

It is essential that the contact person for the application is based in the department.

Sections to be included

At the end of each section state the number of words used. Click [here](#) for additional guidance on completing the template.

1. Letter of endorsement from the head of department:

maximum 500 words

An accompanying letter of endorsement from the head of department should explain how the SWAN action plan and activities in the department contribute to the overall department strategy and academic mission.

The letter is an opportunity for the head of department to confirm their support for the application and to endorse and commend any women and STEM activities that have made a significant contribution to the achievement of the departmental mission.

University of
Hertfordshire



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Our ref:
Your ref:

24 October 2014

Dear Ms Dickinson,

I am delighted to be writing this letter in my dual capacity as Dean of School and co-author of this Athena SWAN Bronze departmental application. I have led the School of Physics, Astronomy and Mathematics since 2006, and am seeking locally to address the huge gender disparity which exists in the fields of physics, astrophysics and, to a lesser extent, mathematics. The imbalance stands in the way of progress for women students, who may find it difficult to picture themselves in physics and mathematics classrooms and careers, and for women staff, who may find the environment in which they work less attuned to their needs and less conducive to their progression. Fortunately, the School benefits from having a significant number of academic staff in dual-career households where shared caring responsibilities are the norm. This has helped flexible working to be accepted as an important enabler for staff in the School. Building on this support for addressing gender disparities, the Institute of Physics Juno and the ECU Athena SWAN programmes have become valuable vehicles for garnering support for change. They provide a formal, national context within which we have been able to initiate discussions of steps the School should take to improve the participation and progression of women students and academics. In 2012, the Physics and Astrophysics Programme Tutor, Dr Alan McCall, and I committed the School as a Juno Supporter, recognised by the IoP in early 2013. Dr McCall and I were amongst the founding members of the University's Athena SWAN Self-Assessment Team, and co-authored our recently submitted Juno Practitioner application. Dr McCall chairs the School's Equality Committee (EC). Numerous other members of the School, both men and women, staff and students, have confirmed their commitment to the Juno and Athena principles by joining the EC. They have engaged fully in discussing and implementing early steps in the pursuit of gender equality, in building support amongst other members of the School, identifying steps the School can take – which we have set out in the Action Plan – and reviewing our progress. Dr Katerina Finnis, who is also a member of the EC, Dr McCall and I are the principal co-authors of this Athena SWAN Bronze Award application. Dr Kristen Coppin, another member of the EC, led the development of the School's Equality and Diversity public website.

As a husband endeavouring to support my wife in achieving her career aspirations alongside my own, and as a father and primary carer of two young children, I recognise some of the personal and cultural pressures and biases which affect women in pursuing their careers. The Juno and Athena SWAN programmes allow us to focus our efforts to address these biases in a more concerted and effective way. My endorsement of this Award therefore stems from my deep involvement in the School's engagement with gender equality.

Yours sincerely

Professor Sean Ryan
Dean of School of Physics, Astronomy and Mathematics



IOP Institute of Physics
Juno Supporter



A charity exempt from registration
under the Second Schedule
to the Charities Act 1993

2. The self-assessment process: maximum 1000 words

Describe the self-assessment process. This should include:

a) The self-assessment team

A description of the self assessment team: members' roles (both within the department and as part of the team) and their experiences of work-life balance

Having declared the School as a Juno Supporter in March 2013, we set up a School 'Equality Committee' (EC) – serving also as our Athena SWAN Self-Assessment Team (SAT) – to review gender equality matters in the School and to examine what could be done to improve our practice, taking a lead from the Juno and Athena SWAN frameworks. Two members of our EC/SAT were founding members of the University's Athena SWAN SAT, and two further members of the EC are also now members of the University's SAT. Thus, we are engaged at School and University level in the pursuit of these goals. While we have identified areas in need of attention in pursuit of gender equality, we are seeking recognition through Athena SWAN and Juno awards of our progress.

The EC/SAT's terms of reference are listed in Table 1.

1	Embrace the six principles of the Juno and Athena SWAN charter and advance matters associated with Equality and Diversity (E&D) in the School
2	Collate and review statistical and qualitative data and received reports from relevant areas
3	Generate an ongoing Action Plan, monitor its implementation and update it as required.
4	Report quarterly to the School Executive Group (SEG) and to the School Meeting
5	Share good practice with other STEMM schools
6	Raise the profile of the Athena SWAN agenda amongst staff and students within the school and externally
7	Work with the Athena SWAN central SAT in the delivery of the Athena SWAN principles

Table 1 School Equality Committee (EC)/Self-Assessment Team (SAT) terms of reference

The EC/SAT has 14 members (8 women, 6 men) who cover a diverse range of life and work experiences including parental leave, flexible working and early career status. The group includes undergraduates (2), postgraduates (2), postdoctoral researchers (2), research/teaching staff (6), and administrative staff (2). Two of the staff were appointed within the last 18 months so have recent experience of the recruitment and induction programmes, and three have managerial responsibilities. Detailed information can be found in Table 2.

We have established five working groups: *quantitative data*; *qualitative data* (one-to-one interviews with staff and students); *'Women in Science' Network* (planning activities to support women in the School); *staff handbook review*; *webpages*. The Dean of School, the Chair of the EC/SAT, and another EC/SAT member were the principal authors of this application, though all EC/SAT members contributed through discussions at EC/SAT meetings or through written feedback, as well as undertaking the work of the working groups. The draft action plan was circulated for discussion at the autumn 2014 meetings of all School academics and the School Executive Group (SEG – composition explained below).

Name	Other roles in School	Gender	Post	Juno role(s)	Work life balance
Dr Alan McCall (Chair)	Programme Tutor, BSc (Hons) Physics & Astrophysics; UH Athena SWAN SAT	M	Senior Lecturer	Chair; quantitative data	carer, elderly parent
Dr Kristen Coppin	UH Athena SWAN SAP	F	Senior Lecturer; recent (2013) appointee	staff handbook	dual-career marriage; pre-school child at UH nursery
Prof. Janet Drew	Director, Centre for Astrophysics Research	F	Professor	research link	dual career marriage; children in higher education
Dr Aidan Farrow	Postdoctoral Research Assistant	M	Postdoctoral Research Assistant	research link	
Dr Katerina Finnis	Athena SWAN Officer (University Equality Office)	F	Athena SWAN Officer; recent (2014) appointee	quantitative & qualitative data	dual-career marriage; young children, works PT and flexibly
Prof. Martin Hardcastle	School IT+HPC strategy leader	M	Professor	School "Women in Science" activities	dual career marriage; two children, one pre-school, one in education
Dr Evelyn Hesse	UH Common Reading Programme – School link tutor	F	Senior Research Fellow	qualitative data; School "Women in Science" Mentor	

Ms Nancy Hine	PhD student; SEPnet Postgraduate Representative (for all SEPnet PGR students)	F	PGR student	School "Women in Science" activities	
Dr Steve Kane	Associate Dean – Academic Quality	M	Principal Lecturer	staff handbook	dual- career marriage; preschool child at UH nursery
Dr Xin Kong	Postdoctoral Research Assistant	F	Postdoctoral Research Assistant	School "Women in Science" activities	
Ms Carol Norris	Programme Administrator	F	Programme Administrator	UG student link	sole parent; child in education
Ms Dagna Nowakowska	Undergraduate student; School Student Representative Organiser	F	UG student	UG student link	
Prof. Sean Ryan	Dean of School; UH Athena SWAN SAP	M	Professor	quantitative data	dual- career marriage; children in education
Mr Michael Smith	PhD student; PGR Student Representative on SAC	M	PGR student	research student link	

Table 2 Membership of Equality Committee at 1/9/2014

b) The self-assessment process

An account of the self assessment process: details of the self assessment team meetings, including any consultation with staff or individuals outside of the university, and how these have fed into the submission.

The EC/SAT met four times between July 2013 and November 2014. Working groups meet separately to progress particular Equality and Diversity (E&D) strands, and report at the EC/SAT meetings. In 2014, the Chair of the EC/SAT became a member of the SEG, which meets 4 times a year, and reports to the School Meetings (which convene 3 times a year).

Before each EC/SAT meeting, an agenda is circulated by the Chair who invites members to add items. During the meetings, the team discuss progress toward gender equality, review any data, plan further actions, and discuss ways of obtaining quantitative and qualitative data from staff and students to influence decision making. Other issues discussed included raising awareness of gender equality and the Juno and Athena SWAN programmes amongst staff and students. For example, initial content for the School's public E&D webpages was discussed by the EC/SAT, and Dr Kristen Coppin led the working group to develop and populate the website¹. Responsibilities on the EC/SAT committee are recognised in the School workload model, which is transparent and sent to all academic staff. Members of the EC/SAT are identified for taking action, reporting progress and communicating within the School.

Minutes of the EC/SAT committee are posted on the School's intranet ("StaffNet") E&D webpage, and also stored on a shared Athena SWAN sharepoint which can be accessed by the University-wide SAT and by other STEMM Schools within the University who are all pursuing Athena SWAN Awards and keen to share good practice.

The EC/SAT benefits from various strands of consultation in order to further develop the ability to reflect on current practices and biases, identify challenges and ways of overcoming these challenges:

- The University's Head of Equality & Diversity (Min Rodriguez) and the South East Physics Network (SEPnet) Diversity Director (Prof. Averil Macdonald) have acted as advisors. Prof. Averil Macdonald advised the School in particular on the role of diversity images and on the gender constitution of student tutorial groups, both of which are discussed later in this application.
- The EC/SAT communicates closely with the University SAT via four common members (who sit on both the School and the Central SAT).
- One member of the EC/SAT (Dr Kristen Coppin) attended a panel hearing at the ECU Offices in London on 28 July 2014.
- One member of the EC/SAT (Prof. Sean Ryan) co-organised an interactive workshop "Managing in Pursuit of Gender Equity" with two women STEMM managers for the University's 2014 Managers' Conference on 16 September 2014.
- The EC/SAT has initiated one-to-one interviews/conversations with staff and PG/UG students, undertaken by an independent member of the EC/SAT (the University's Athena SWAN Officer, rather than a School manager) to better understand their experiences and needs. These interviews are considered an ongoing project and are being carried out to complement the more formal staff surveys which are conducted every second year. To date, 14 interviews have been conducted (4 with staff, 4 with PG students and 6 with UG students).

c) Plans for the future of the self-assessment team

Plans for the future of the self assessment team, such as how often the team will continue to meet, any reporting mechanisms and in particular how the self assessment team intends to monitor implementation of the action plan.

As the SAT is also the School's EC, it will continue indefinitely, and its Chair will continue as a member of the SEG. The EC/SAT will meet every three months in pursuit of gender equality, which is particularly important in our School since physics, astronomy and mathematics historically are

¹ <http://www.herts.ac.uk/apply/schools-of-study/physics-astronomy-and-mathematics/about-the-school/women-in-physics-astronomy-and-mathematics>

male dominated. The focus of the EC will therefore be on making proactive changes in the School to ensure it provides an attractive and supportive environment for female students and scientists, and to prioritise outreach work that encourages young women into the sciences. It will continue to collate and analyse statistical and qualitative data, monitor the implementation of the existing Athena SWAN (and Juno) action plans, identify areas where change has taken place, add new actions as required in pursuit of gender E&D guided by the Juno Champion and Athena SWAN Silver frameworks, and continue to share good practice with other STEMM schools through joint memberships (four members of the EC/SAT are on the University SAT) and sharing EC/SAT minutes. The Membership of the EC/SAT will be reviewed annually.

[991 words]

3. A picture of the School

maximum 2000 words

a) Context

Provide a pen-picture of the department to set the context for the application, outlining in particular any significant and relevant features

The School of Physics, Astronomy and Mathematics is one of ten Schools at the University. Physics (including astrophysics) constitutes its major staff grouping and research activity. Undergraduate (UG) students are split across two programmes, Physics & Astrophysics (42%) and Mathematics (58%), and thus benefit from exposure to two cognate academic cultures. Current numbers of staff and students are shown in Table 3. The female fraction of full-time academic staff (20%) is typical of the national situation, i.e. dominated by male faculty.

Research staff numbers are subject to fluctuations in grant-funding, which led to a recent drop in female research staff. We return below to the need to support women in applying for grants and fellowships in the School. The University's commitment to the training and career development of its researchers is recognised by its European Commission "HR Excellence in Research Badge"² received in 2010 and extension for 2 years in 2012. University training has been mapped against Vitae's "Researcher Development Framework"³ (RDF), with over 60 sessions for students and early-career researchers covering all subdomains of the RDF. These are advertised on and bookable via the University intranet (StaffNet). Courses run at different times on different days to minimise attendance problems caused by work schedules.

School membership	Total	Male # (%)	Female # (%)
F/T Academic Staff	42	34 (80%)	8 (20%)
Research Staff	15	14 (93%)	1 (7%)*
Research Students	38	30 (79%)	8 (21%)
UG Students (Physics)	188	153 (81%)	35 (19%)
UG Students (Maths)	257	158 (61%)	99 (39%)
Technical Officers	3	3 (100%)	0 (0%)
Administrators	3	0 (0%)	3 (100%)

Table 3. Numbers and gender percentages of staff and students (October 2014)

* The very low figure is due (in part) to the recent loss of three research posts held by female researchers – all associated with post-doctoral funding cycles coming to an end.

The SEG (see Figure 1) comprises the Dean of School, three Associate Deans (Learning & Teaching, Academic Quality, and Research) and staff leading other major activities– two Research Centres⁴, Admissions, Finance, Health & Safety, HR, Administration and (since 2014) Equality & Diversity (E&D) represented by the Chair of the Equality Committee (EC). Recommendations from the EC are discussed by SEG and decisions taken to commit the School. The SEG meets 4 times per year. The School has three other major forums for staff and student input: the School Academic Committee (SAC – meeting 4 times per year) which has staff and student representatives concentrating on formal academic matters, the Programme Committee (2 times per year) which is the major joint staff-and-student committee concerning teaching and learning, and the School

² <https://www.vitae.ac.uk/policy/hr-excellence-in-research>

³ <https://www.vitae.ac.uk/researchers-professional-development/about-the-vitae-researcher-development-framework>

⁴ The Centre for Astrophysics Research (CAR) and the Centre for Atmospheric and Instrumentation Research (CAIR) are two University research centres comprising members of the School.

Meeting (3 times per year) which is the major all-staff forum. Each School Meeting receives a written “Short Report from the Dean” which records the successes of women (and men) in the School, e.g. grants awarded, honours bestowed, professional recognitions and research degree completions, so news about individual achievements are publicised and acknowledged, including those of female staff who may be more reserved about “blowing their own trumpet”. For several years, these forums have had standing items on their agendas on E&D, to raise awareness and consideration of gender issues. School meetings, and the weekly astrophysics colloquium, are timetabled early afternoon to accommodate staff with caring responsibilities who would not be able to attend late meetings or would miss out on important networking following meetings and seminars.

In recognition of deficiencies we have identified in the collection, analysis and reporting of gender-related data, members of the EC have the authority to progress these activities. The Chair of the EC is a member of all of the forums noted (starred in Figure 1) including co-chairing the Programme Committee. Other members of the EC serve on one or more of these forums. Discussion of the EC’s work is promoting School discussion on how we might advance women’s careers, with recommendations considered by SEG.

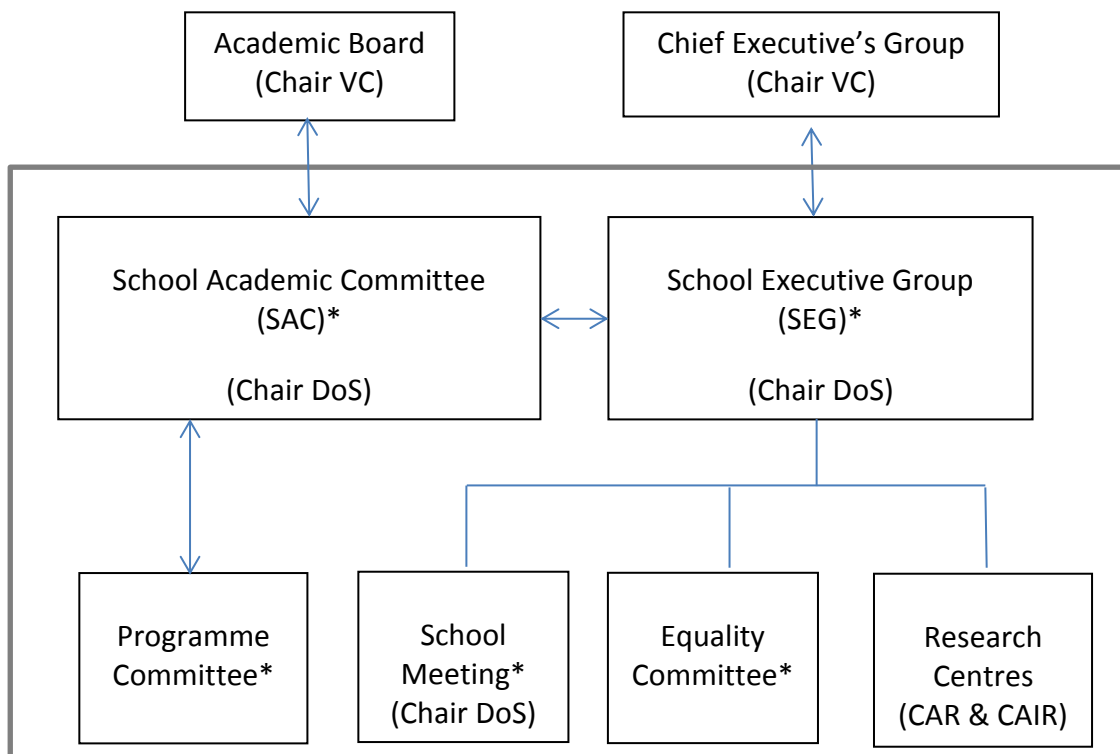


Figure 1. School committee structure and its relationship with the two major University boards. Asterisks denote committees of which the EC Chair is a member.

b) Analysis

Provide data for the past three years (where possible with clearly labelled graphical illustrations) on the following with commentary on their significance and how they have affected action planning

Student data

(i) Numbers of males and females on access or foundation courses

comment on the data and describe any initiatives taken to attract women to the courses.

The School does not teach access or foundation courses. Some students (typically <10 per year) come via an initial year at North Hertfordshire College, but most students on that path progress to other STEMM degrees, so data for that path provide no insight into our School.

(ii) Undergraduate male and female student numbers

– full and part-time – comment on the female:male ratio compared with the national picture for the discipline. Describe any initiatives taken to address any imbalance and the impact to date. Comment upon any plans for the future.

Our programmes are offered full-time (>90%) and part-time (<10%). Table 4 shows that women account for around 30% of students. This under-representation is consistent with the 2011/12 ECU benchmark, being a long-standing feature of physics and, to a lesser degree, mathematics nationally. Efforts in the School to address this already include ensuring that our outreach programmes have female involvement (18% of visiting-group hours from 2010/11-2012/13 were delivered by female PGR students, who accounted for 22% of the PGR students), and that Open Days include female staff *or* student ambassadors, to show that women are active in these disciplines. We will ensure that both female staff *and* student ambassadors are present (**Action A**).

The proportion of women on part-time UG courses has increased (Figure 2), albeit with high statistical uncertainty⁵. We are interviewing students to gain information on their perceptions of the programme (**Action B**), and will now target *part-time* UG students to understand their choice of study mode and their support by the school (**Action C**).

Year	Full-time			Part-time			Benchmark ⁶ ECU	
	Female	Male	Female%	Female	Male	Female%	Female% full-time	Female% part-time
2010/11	84	210	(29±3)%	4	16	(20±10)%		
2011/12	125	254	(33±3)%	6	16	(27±11)%	34%	33%
2012/13	119	260	(31±3)%	13	23	(36±10)%		

Table 4. Total numbers of male and female UG students registered (i.e. not just *new* students), and female percentage. The statistical uncertainty in the female percentage is also quoted, based on Poisson statistics for the number of female students. Note that the data over the three academic years shown are *not* independent, since a full-time undergraduate degree last typically 3-4 years, and part-time degrees even longer. See also Figure 2.

⁵ We use Poisson statistics to approximate the statistical uncertainty in the female percentages, in recognition that the specific numbers achieved in any one year represent a single realisation of possible outcomes for the School within the national context.

⁶ Benchmarks: As the u/g student composition is ~20% Physics, ~20% Astronomy, and ~60% Mathematics, we present a weighted average benchmark in these proportions, based on Equality Challenge Unit data for 2011/12.

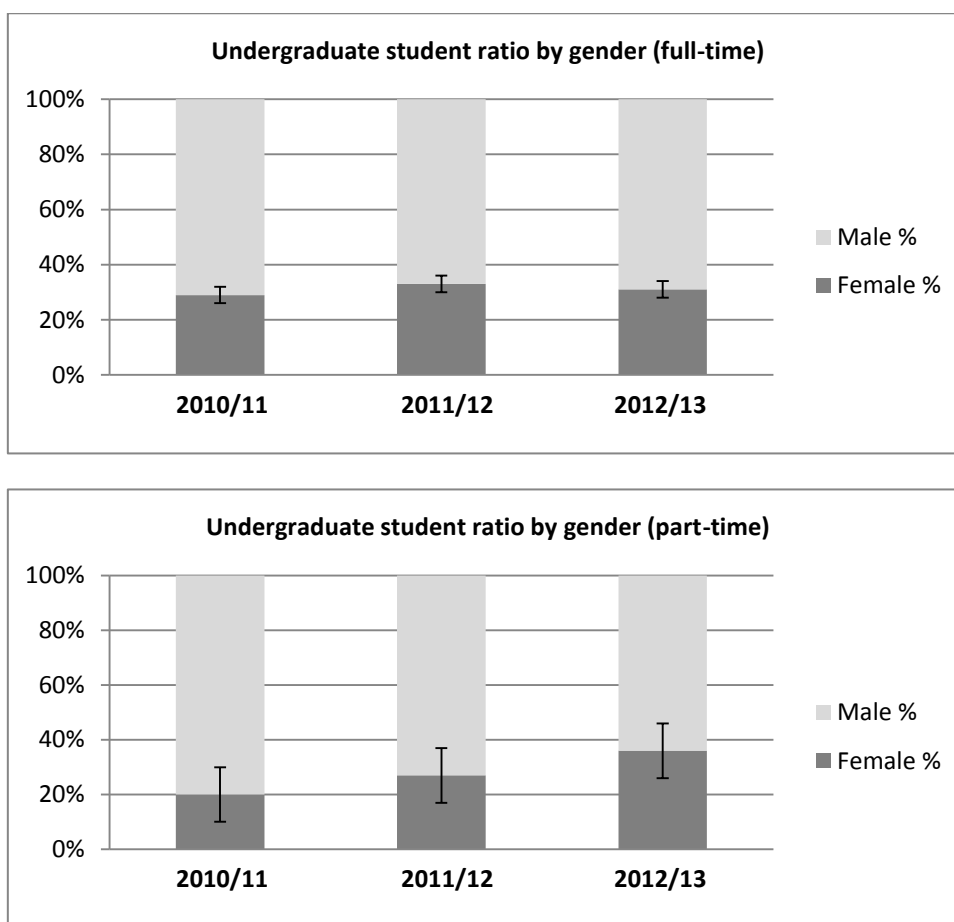


Figure 2. Percentage of Male and Female Students on UG courses (upper: full-time; lower: part-time). The statistical uncertainty on the female percentage is shown by the error bar - see also Table 4.

(iii) Postgraduate male and female numbers completing taught courses

comment on the female:male ratio compared with the national picture for the discipline. Describe any initiatives taken to address any imbalance and the effect to date. Comment upon any plans for the future.

The School has no PGT courses.

(iv) Postgraduate male and female numbers on research degrees

comment on the female:male ratio compared with the national picture for the discipline. Describe any initiatives taken to address any imbalance and the effect to date. Comment upon any plans for the future.

The female fraction amongst research degree applications, offers and acceptances (Table 5) is similar to the undergraduate fractions (~20%) and is similar to the 2013/14 STFC Studentship benchmark, suggesting a representative flow from UG to PGR levels, and that the School provides equality of opportunity for female and male graduates in these fields. However, with the female percentage of UG students already being well below 50%, the PGR population inherits a huge female deficit compared to the general population. Efforts will be made to ensure the School is welcoming to female PGR students, to support the aspirations of young female researchers (**Action D**).

Year of entry		Applications	Offers	Acceptances	Benchmark
2010/11	Female	28	3	3	
	Male	86	14	14	
	Female %age	25%	18%	(18±10)%	
2011/12 ⁷	Female	2	1	1	
	Male	8	7	7	
	Female %age	20%	13%	(13±13)%	25% Physics 36% Astro (ECU)
2012/13	Female	13	6	5	
	Male	34	13	11	
	Female %age	28%	32%	(31±14)%	
2013/14	Female			2	
	Male			8	
	Female %age			(20±14)%	22% (STFC)

Table 5. Postgraduate research applications, offers and acceptances. Number and percentage of female postgraduate applicants, offers made and acceptances. Data are for all MSc by Research and PhD full-time students (UK, EU and o/s) in Physics & Astrophysics. UH data based on Registry figures in Report to Research Degrees Board 2010/11 and 2012/13, and PGR Tutor records. Benchmark: 2011/12; ECU⁸; 2013/14: STFC PhD studentships reported 12/5/2014

The female percentage on PGR programmes (Table 6; also Figure 3) appears to be slightly below the benchmark, albeit within the statistical uncertainty. We plan to increase this. We will review and revise our webpages and recruitment process to ensure that they encourage female students, e.g. by highlighting the flexibility in being a research student and the supportive environment in the School. The EC/SAT has established a School “Women in Science” Network which will address final year undergraduates in talks delivered by female PGR students and postdocs. In addition, the University is planning annual PG STEMM open days; we will ensure that prospective students have the opportunity to discuss postgraduate study with female staff and students (**Action D**).

Year	Full-time			Part-time			Benchmark ⁹ ECU	
	Female	Male	Female%	Female	Male	Female%	Female% F/T	Female% P/T
2010/11	9	28	(24±8)%	3	9	(25±14)%		
2011/12	6	25	(19±8)%	0	4	0%	(29±3)%	unknown
2012/13	10	30	(25±8)%	2	7	(22±16)%		

Table 6. Total number of students (i.e. not just *new* students) registered on PG Research programmes. The statistical uncertainty in the female percentage is also quoted, based on Poisson statistics for the number of female students. Note that the data over the academic three years shown are *not* independent, since the PGR numbers are dominated by PhD degrees which last typically 3-4 years.

⁷ Figures for 2011/12 are incomplete due to a changeover of computer systems that year.

⁸ (<http://www.ecu.ac.uk/equality-charter-marks/athena-swan/athena-swan-resources/data/>)

⁹ Benchmark: : As the PGR student composition is ~20% Physics and ~80% Astronomy, we present a weighted average benchmark in these proportions, based on Equality Challenge Unit data for 2011/12.

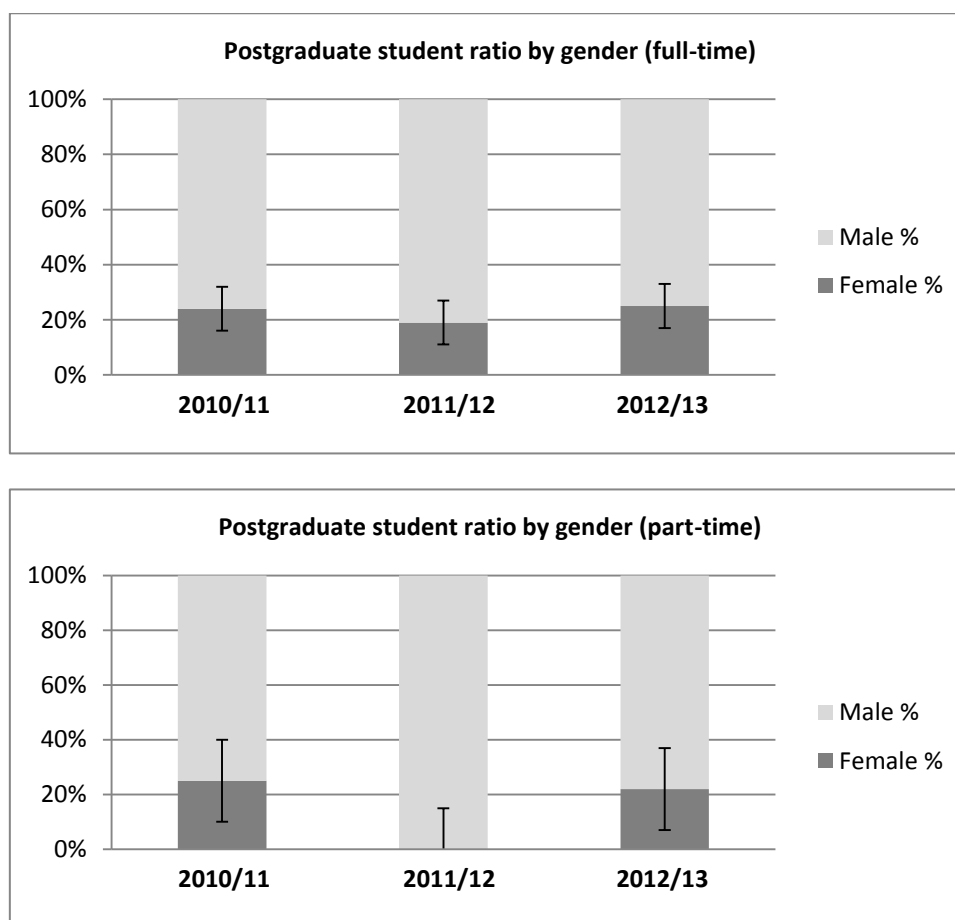


Figure 3. Male and Female Student Percentages on Postgraduate Research Programmes

The female fraction of PGR degree completions (Table 7: 13-31%) is similar to the degree registrations (Table 6: 19-25%), suggesting that women PGR students are supported to completion similarly to male students.

Year of completion	Female Awards	Male Awards	Female %age	Benchmark ¹⁰ ECU
2010/11	1	7	13%	
2011/12	4	9	31%	34%
2012/13	4	10	29%	

Table 7. Postgraduate completions: Number and percentage of female postgraduate awards. Data are for all MSc by Research, MPhil and PhD students (UK, EU and o/s) in Physics & Astrophysics. Source: UH Doctoral College records.

¹⁰ Benchmark: As the PGR student composition is ~20% Physics and ~80% Astronomy, we present a weighted average benchmark in these proportions, based on Equality Challenge Unit data for 2011/12.

(v) Ratio of course applications to offers and acceptances by gender for undergraduate, postgraduate taught and postgraduate research degrees

– comment on the differences between male and female application and success rates and describe any initiatives taken to address any imbalance and their effect to date. Comment upon any plans for the future.

For the UG programmes, offers are made on the basis of grades only, rather than potentially gender-distinguished factors such as how “confident” the applicant seems at interview. Applications, offers and acceptances (Table 8) indicate that the offers-to-applications and acceptances-to-applications percentages are very similar (within the statistical uncertainty) for female and male students, providing no evidence of gender bias in the recruitment process or in the perceptions of the School, e.g. at Open Days. Nevertheless, the Dean of School has committed the School to Unconscious Bias Awareness training for all staff (and optionally for PGR students), so that the School continues to recruit and develop students and staff without gender bias. This training has already been undertaken by 59% of staff (34 academic and research staff including members of the SEG, four administrative and technical staff) and three postgraduates (**Action E**).

Year	Gender	Appl'ns	Offers	Accept's	Offers/ appl'ns	Accept's/ offers	Accept's/ appl'ns
2010/11	Female	185	125	28	(68±6)%	22%	(15±3)%
	Male	428	296	59	(69±4)%	20%	(14±2)%
2011/12	Female	272	220	61	(81±5)%	28%	(22±3)%
	Males	591	430	118	(73±4)%	27%	(20±2)%
2012/13	Female	278	220	35	(79±5)%	16%	(13±2)%
	Male	698	511	102	(73±1)%	20%	(15±1)%

Table 8. UG course applications, offers and acceptances, and related ratios, by gender. The statistical uncertainty in the application percentages is also quoted, based on Poisson statistics for the number of female students.

Analysis of PGR applications, offers and acceptances (Table 9 and Figure 4) provides similar percentages for male and female students, and provides no evidence of gender bias, though the statistical uncertainties are high due to the small number of students involved. We will continue to monitor recruitment statistics by gender (see Action D).

Year	Gender	Appl'ns	Offers	Accept's	Offers/ appl'ns	Accept's/ offers	Accept's/ appl'ns
2010/11	Female	28	3	3	(11±6)%	100%	(11±6)%
	Male	86	14	14	(16±4)%	100%	(16±4)%
2011/12	Female	2	1	1	(50±50)%	100%	(50±50)%
	Male	8	7	7	(88±18)%	100%	(88±18)%
2012/13	Female	13	6	5	(46±19)%	83%	(38±17)%
	Male	34	13	11	(38±11)%	85%	(32±10)%

Table 9. PG Research applications, offers and acceptances, and related ratios, by gender. The statistical uncertainty in the application percentages is estimated using Poisson statistics for the small number of students. The data source is the same as for Table 5.

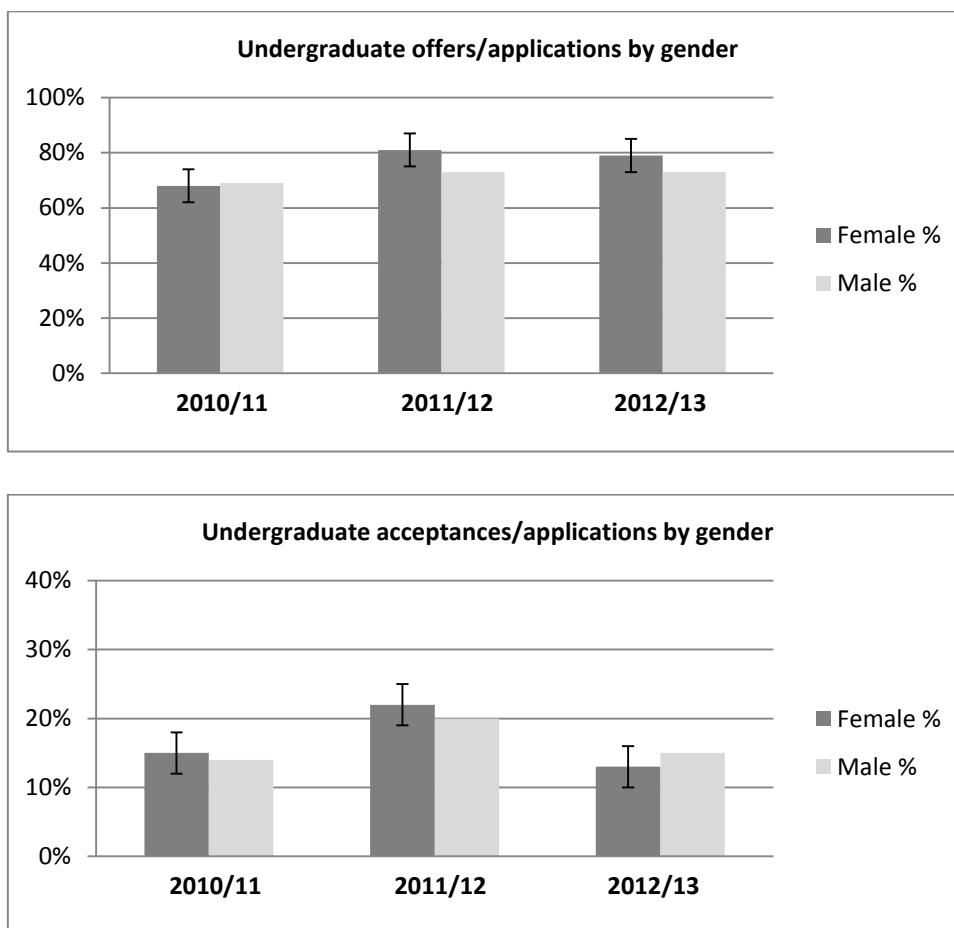


Figure 4. Undergraduate recruitment ratios by gender

(vi) Degree classification by gender

comment on any differences in degree attainment between males and females and describe what actions are being taken to address any imbalance.

UG Degrees

Due to the small numbers of students in each degree classification band (Table 10), the statistical uncertainties in percentages are sizeable. At first sight it appears (Figure 5) that the percentage of women achieving first-class degrees increased steadily from 17% in 2010/11 to 43% in 2012, but as the statistical uncertainties are around 11-12%, this growth is at best marginally significant. Furthermore, the increase comes entirely from 2:1 degrees, which for female students fell over this period from 50% to 30%. From 2012/13 we ran small-group tutorials at first year, to increase the early engagement and later achievement of female students, who may benefit more from this more personalised tuition. Progression and classification figures will be monitored and analysed by the EC/SAT (**Action F**). The number of “good” degrees, defined as 1st and 2:1, show (67±24)%, (70±19)% and (73±14)% of female students attaining good degrees, compared with 75%, 72% and 77% of male students, which are statistically indistinguishable.

Year	Gender	First # (%)	2:1 # (%)	2:2 # (%)	3rd # (%)	Pass/ Non-hons
2010/11	Female	2 ((17±12)%)	6 ((50±20)%)	1 (8%)	1 (8%)	2 (17%)
	Male	12 ((32± 9)%)	16 ((43±11)%)	7 (19%)	2 (5%)	0
2011/12	Female	5 ((25±11)%)	9 ((45±15)%)	4 (20%)	1 (5%)	1 (5%)
	Male	24 ((39±8)%)	20 ((33±7)%)	15 (25%)	0	2 (3%)
2012/13	Female	16 ((43±11)%)	11 ((30±9)%)	5 (14%)	3 (8%)	2 (5%)
	Male	21 ((40±9)%)	19 ((37±9)%)	6 (12%)	4 (8%)	2 (4%)

Table 10. UG Degree Classifications by gender, giving the number of students and percentage of total number *for that gender*, i.e. the percentages sum to 100% along each row. The statistical uncertainty is quoted for 1st and 2:1 degrees, based on Poisson statistics for the number of students.

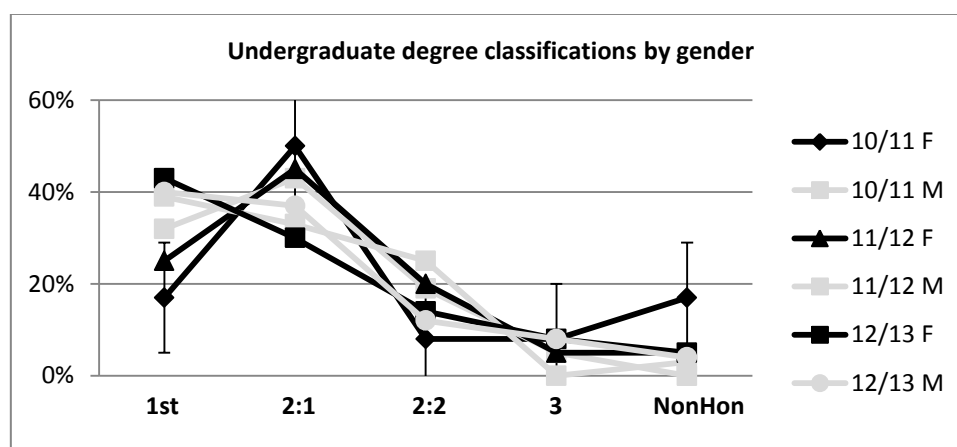


Figure 5. Undergraduate degree classification profiles by gender. The statistical uncertainty is shown for the 2010/11 female data only, to avoid cluttering the diagram

PG Degrees

There are too few PGR completions in any *one* year to support a meaningful gender-analysis of PGR outcomes, but the female percentage for the *sum* of the three years, 26% (Table 11), is similar to the degree acceptances (Table 5: 14-31%), suggesting that female PGR students are completing proportionately to male students.

Year of completion	Female Awards	Male Awards	Female %	Benchmark Female %
2010/11	1	7	13%	
2011/12	4	9	31%	25%(P), 36%(A)
2012/13	4	10	29%	
Three year sum	9	26	26%	

Table 11. Postgraduate completions: Number and percentage of female postgraduate awards. Data are for all MSc by Research, MPhil and PhD students (UK, EU and o/s)
Source: UH Doctoral College records.
Benchmark: ECU stated separately for physics and astrophysics

In summary, the figures suggest that the School is providing equality of opportunity to male and female PGR students. The result is likely due to the high prior achievements of PGR students, in combination with the personalised supervisor-student working relationship from the outset of the PhD programme (see below). Nevertheless, we will require more systematic reporting of PGR student applications, offers, acceptances and completions to the SAC, and further interviews with PGR students (**Action G**).

Staff data

(vii) Female:male ratio of academic staff and research staff

comment on any differences in numbers between males and females and say what action is being taken to address any underrepresentation at particular grades/levels

The gender split of staff for 2012/2013/2014 (Table 12, also Figure 6) are above/at/below the benchmark respectively. The decrease is driven overwhelmingly by changes in fixed-term funding for early-stage researchers, a point we return to later. Specifically, a major EU research grant which originally had recruited predominantly female (3) rather than male (1) researchers ended by September 2013, and by September 2014 the tapering of a Fellowship scheme resulted in the net loss of two female researchers. Over the same period, external fellowship holders who joined the School were all male. It is disappointing that no female fellowship winners brought their fellowships to the School, as doing so would have given PhD students and staff in the School greater encouragement and evidence of the achievements of women scientists. Working through scientific networks, the School will actively encourage women to apply for Fellowships (**Action H**), and ensure that all staff undertake unconscious bias awareness training so that recruiters are aware of the possible subversive role of unconscious bias amongst both male and female recruiters acting against female applicants, particularly in fields that, like physics, astronomy and mathematics, are currently male-dominated. Further details of recruitment and promotions can be found in Section 4.

Month Year	Female	Male	Female %	Benchmark ¹¹ Female%
Sep 2012	15	46	(25±6)%	18%
Sep 2013	12	51	(19±5)%	
Sep 2014	9	50	(15±5)%	

Table 12. Total academic and research staff headcount by gender.
Benchmark: ECU data for 2011/12

¹¹ Benchmark: As the staff composition is ~85% Physics and Astronomy, and ~15% Mathematics, we present a weighted average benchmark in these proportions, based on Equality Challenge Unit data for 2011/12.

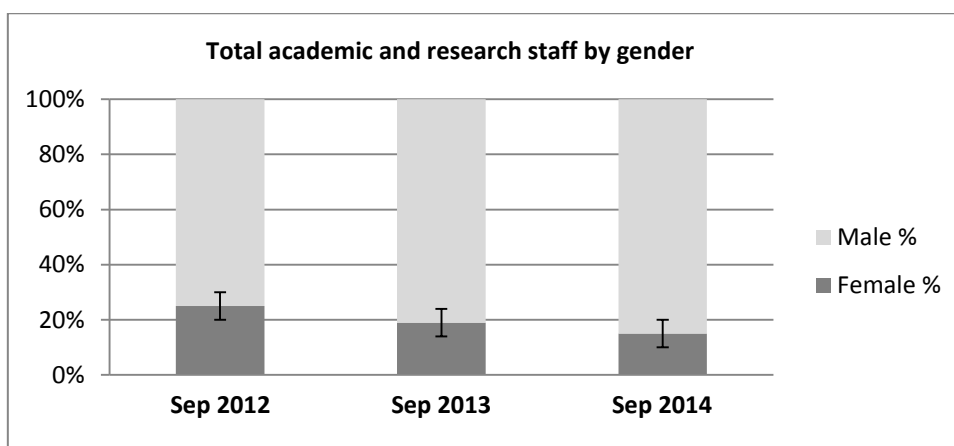


Figure 6. Staff percentage by gender.

Table 13 illustrates the generic staff grade structure, while Table 14 and Figure 7 indicate the grade distribution of School staff, by gender. This is very similar to benchmark (ECU) figures. Due to different recruitment demographics 10+ years ago, there are currently no female principal lecturers/readers, but because of more recent changes there is a larger-than-benchmark fraction of female senior lecturers. One action for the School is to interview all women at Senior Lecturer level to ensure they are aware of promotional processes and criteria (**Action I**). Further actions relating to careers and promotion are discussed in Section 4.

Grade	Academic posts	Research posts
Academic manager/Professor	Academic managers incl. Heads of Department/Deans of School	Professor
UH9	Principal Lecturer	Reader
UH8	Senior Lecturer	Senior Research Fellow
UH7	Lecturer	Research Fellow
UH6		
UH5		Research Assistant
UH4		

Table 13. University of Hertfordshire pay and grading structure for salaried staff.

		Sep 2012		Sep 2013		Sep 2014		3 yr average		Benchmark
Grade		Female	Male	Female	Male	Female	Male	Female # (%)	Male	Female %
Academic Manager (Professors, Dean, Associate Deans etc.)	Prof.	1	7	1	9	1	10	1 (10%)	9	7%
	Non-Prof.		2		2		2	0 (0%)	2	21%
UH9 (Principal lecturer and reader)		1	13	0	12	0	11	0 (0%)	12	
UH8 (Senior lecturer/senior research fellow)		4	6	6	8	5	7	5 (42%)	7	
UH7 (Lecturer/research fellow)		6	13	2	13	2	13	3 (19%)	13	
UH6 (Research fellow)		3	5	3	7	1	6	2 (25%)	6	
UH4,5 (Research assistant)		-	-	-	-	0	1	0	0	
Totals		15	46	12	51	9	50	11 (18%)	49	18%

Table 14. School staff and grades.

Benchmark: ECU 2011/12 data for Professors and non-Professors (weighted 85% physics, 15% mathematics).

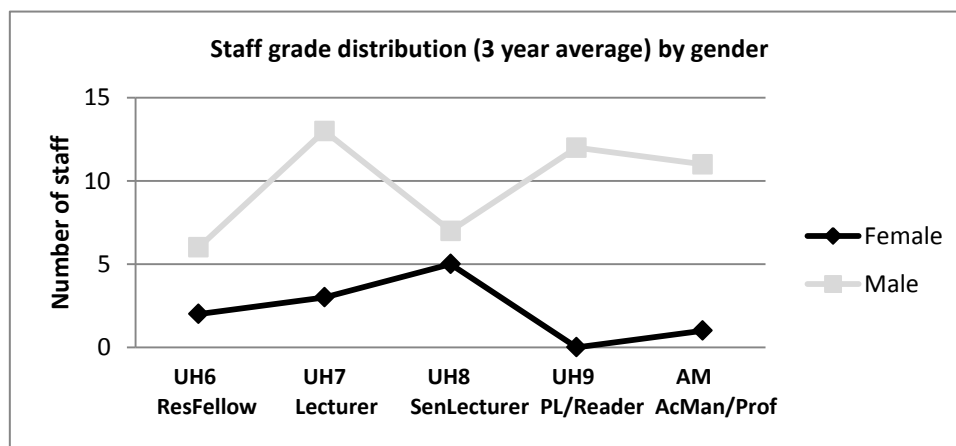


Figure 7. Staff grade distribution by gender.

(viii) Turnover by grade and gender

comment on any differences between men and women in turnover and say what is being done to address this. Where the number of staff leaving is small, comment on the reasons why particular individuals left

The numbers of male and female *permanent* staff leaving the School are low; staff leaving are almost exclusively early-stage staff on fixed-term contracts. Due to the low number of female staff (see Table 14), the percentage turnover in female fixed-term staff (~60-100%) is significantly

higher than for male fixed-term staff (~30%). In particular, the turnover of women staff on fixed-term appointments is 5/8 for the 12 months to September 2013, and 4/4 for the twelve months to September 2014. One action for the School will be to mentor all women (and ultimately men too) on fixed term contracts to ensure they are supported in bidding for funding extensions prior to the end of their contracts (**Action J**). We will be supported in this endeavour by the University.

Year	Gender	Staff @ Sept of year #	Fixed-term staff @ Sept of year #	joiners in 12 months prior to Sept of year	leavers in 12 months prior to Sept of year	leavers on fixed term contract	turnover (leavers) rate (all)	Turnover (leavers) rate of fixed term	turnover (leavers) rate excluding fixed term
2012	Female	15	8						
	Male	46	15						
2013	Female	12	4	2	5	5	(33±15)%	(63±28)%	0%
	Male	51	17	10	5	4	(11±5)%	(27±13)%	(13±13)%
2014	Female	7	1	0	5	4	(42±19)%	(100±50)%	(13±13)%
	Male	50	15	5	6	5	(12±5)%	(29±13)%	(3±3)%

Table 15. Leavers by gender and permanence of contract.

[1985 words]

4. Supporting and advancing women's careers

maximum 5000 words

Key career transition points

Provide data for the past three years (where possible with clearly labelled graphical illustrations) on the following with commentary on their significance and how they have affected action planning.

(a)(i) Job application and success rates by gender and grade

– comment on any differences in recruitment between men and women at any level and say what action is being taken to address this.

Job application and success rates¹² are presented in Table 16. At face value, female applicants appear to have had a slightly higher chance of being shortlisted (in 2013) and appointed (in 2014) than men, but due to the small number of recruitments, the differences have no statistical significance. What is genuinely encouraging is that the female percentage of applicants increased from 19% in 2013 to 42% in 2014. Identifying the cause is difficult: whether it resulted from the inclusion of statements in some advertisements since 2013 explicitly encouraging women to apply¹³, whether explicit flexibility built into recent job specifications made the roles more attractive, or whether the School's commitment to E&D as a Juno Supporter has made a difference, we cannot tell. Feedback from one appointee (appointed 2012) indicated that in her case it was the potential for securing *two* posts, for married scientists. In future we will include statements in advertisements encouraging women to apply, and analyse applicant gender data to promote gender-informed decision making (**Action L**). We will also ask applicants to identify in the HR equality monitoring questionnaire the reasons that encouraged them to apply (**Action M**).

Year	Gender	Applications		shortlisted		Employed		
		#	% of total	#	% of app's	#	% of applications	% of shortlist
2013	Female	16	(19±5)%	5	(31±14)%	1	(6±6)%	(20±20)%
	Male	68	81%	15	(22±6)%	3	(4±3)%	(20±12)%
	Total	84	≡100%	20		4		
2014	Female	35	(42±7)%	3	(9±5)%	1	(3±3)%	(33±33)%
	Male	50	58%	6	(12±5)%	1	(2±2)%	(17±17)%
	Total	85	≡100%	9		2		

Table 16. Job application and success rates for the School

Data on shortlisting and interviewing are patchy, as HR has retained only partial data beyond 6 months and only incomplete, unofficial records survive. They show (Table 17) that typically 17-25% of shortlisted applicants were female, similar to the national benchmark for staff. This suggests the shortlisting processes was conducted fairly. The female percentage amongst interviewers meets or exceeds the percentage amongst interviewees, reflecting our policy that every appointment panel interviewing women should have at least one, ideally more, female member. (Of the ten interviews in Table 17, only one had no shortlisted women.) The data provide

¹² In 2010 the University moved to an online recruitment system to manage all applications. In response to requirements in the Data Protection Act, a decision was made to retain applicant data in the HR system for 6 months only. A subset of data was retained to track success rates by job type and protected characteristics, but from 2010 until 2013 these subsets did not record the name of the School. Consequently there are no School-specific records to analyse in 2012 or earlier.

¹³ "Organisations go wrong ... assuming the right people will apply for a position without encouragement." ["Where are the Women?", Professor Dame Athene Donald, talk given 2013]

confidence that these processes have been conducted fairly, but the gaps in the data have alerted the School to the need to collect and review appointment data independently of HR (see Action L).

Year	Interviews	Shortlisted			Interviewers			Appointees ¹⁴		
		Female	Male	Female%	Female	Male	Female%	Female	Male	Female%
2011/12	4	4	19	(17±9)%	4	15	(19±9)%	0	4	0%
2012/13	2	unknown			2	8	(20±14)%	1	3	(25±25)%
2013/14	4	4	12	(25±13)%	5	11	(31±14)%	3	2	(60±35)%
Total	10	8	31	(21±7)%	11	34	(24±7)%	4	9	(31±15)%

Table 17. Gender split for shortlisted applicants, interviewers and appointees. These data are based on incomplete, but probably non-biased, local records.

(a)(ii) Applications for promotion and success rates by gender and grade

comment on whether these differ for men and women and if they do explain what action may be taken. Where the number of women is small applicants may comment on specific examples of where women have been through the promotion process. Explain how potential candidates are identified.

Staff participate in an annual appraisal cycle with their line manager (the School’s participation rate is 84%; see below) which includes a specific discussion of short-term and long-term development priorities including promotion, and the support required to undertake that development. Promotion follows written University procedures, with no annual caps or restrictive time windows. Promotions from Lecturer/Research Fellow to Senior Lecturer/Senior Research Fellow and Principal Lecturer use a job evaluation process (Equate), supported by an HR “partner” who is also a member of the SEG and who, alongside the Dean of School, assists a member of staff to develop their case, before the final case is considered by the Deputy Director of HR and relevant Pro Vice-Chancellor. In the case of promotion to Reader or Professor, a process relying more strongly on research evidence, external referees, and an appointment interview Chaired by the relevant Pro Vice-Chancellor, takes place.

The promotion rates for male and female staff in 2013 and 2014 (Table 18) are very similar (within statistical uncertainties). The female staff member promoted in the year to Aug 13 had been a Lecturer for about three years, had been effective as a teacher, and was encouraged by the Dean of School to submit for promotion. Assistance was given by the Dean in setting out the case, and her case was successfully assessed.

	Year to Aug 2013				Year to Aug 2014			
	New staff	Continuing staff			New staff	Continuing staff		
		Not promoted #	Promoted			Not promoted #	Promoted	
			#	% of continuing			#	% of continuing
Female	2	9	1	(10±10)%	0	7	0	0%
Male	10	36	5	(12±6)%	5	43	2	(4±3)%

Table 18. Applications for promotion and success rates by gender

¹⁴ Some interviews result in more than one appointment being made, so the total number of appointees is greater than the total number of interviews.

All new staff undertake E&D training within six months as a condition of probation, and Unconscious Bias Awareness training is now mandated for all School staff, and recommended for PGR students. This is to help ensure that promotional possibilities are raised with female staff in a timely fashion. The SEG will now consider annual promotions reports like those in Table 18 and ensure that line managers are supporting the development of promotional cases for women scientists from day-one of their career (see Action K).

For each of the areas below, explain what the key issues are in the department, what steps have been taken to address any imbalances, what success/impact has been achieved so far and what additional steps may be needed.

(b)(i) Recruitment of staff

– comment on how the department’s recruitment processes ensure that female candidates are attracted to apply, and how the department ensures its short listing, selection processes and criteria comply with the university’s equal opportunities policies

All posts of more than 0.25 FTE and longer than 3 months duration must be externally advertised, ensuring that a diverse range of women applicants are aware of the opportunity. Salary bands are clearly stated for transparency, and all new staff are assigned a mentor to help them settle in. All staff recruitment activity (approval, advertising, applications, panels, monitoring) is overseen by HR, helping ensure adherence to the University’s equal opportunities policies.

Since the School became a Juno Supporter in early 2013, advertisements have begun carrying a statement of our commitment to diversity and specifically encouraging women to apply. As evidence of success, one of our appointees in 2013 was on maternity leave from another institution, but we were able to recruit her onto a Senior Lectureship via an initial 0.5 FTE contract (at her request) which was progressed to full-time after six weeks. In a more recent (2014) appointment, we reviewed the job description and explicitly advertised the post as “0.5 to 1.0 FTE”, noting that it could be filled part-time, with the specific hours and duties to be finalised in discussion with the successful candidate. This approach proved to be extremely successful, as we recruited a new female lecturer who, for family reasons, would not have applied for a full-time post. We were thus able to recruit a higher calibre lecturer than would otherwise have been possible. We will henceforth ensure that higher levels of flexibility are considered and, where possible, explicitly built into the job specification and advertisement from the start, and all advertisements will explicitly encourage women applicants (see Action L).

All members of staff must complete an E&D training course within their first six months, and must undertake an enhanced E&D course on recruitment and selection before chairing an appointment panel. All School staff are now required to complete unconscious bias awareness and those involved in recruitment will now be required to undertake the enhanced E&D course training (see Action E). We aim for a mix of male and female members on appointment panels; the most recent (2014: Associate Dean) comprised three women and four men.

(b)(ii) Support for staff at key career transition points

Having identified key areas of attrition of female staff in the department, comment on any interventions, programmes and activities that support women at the crucial stages, such as personal development training, opportunities for networking, mentoring programmes and leadership training. Identify which have been found to work best at the different career stages.

Annual appraisals and the assignment of a mentor to new staff were described above. One-to-one interviews are currently being conducted¹⁵ by the Athena SWAN Officer, and while the overall feeling is that:

“it is a friendly and welcoming School”

the need for more personalised mentoring was mentioned in most interviews. One member of staff suggested that

“mentoring would help staff like me with career development advice...could help me with the long-term planning as my contract will expire soon.”

The EC/SAT will establish a School “Women in Science” Mentor (see Action J), to be taken up by a senior female staff member who is currently undertaking the national Aurora Leadership Development Programme, funded by the School.

Support is also available through central provision by the University, which offers extensive training including the Researcher Development Programme to all staff, and alerts them to events via emails which include links by which staff can book themselves onto sessions. A workshop ‘Career progression for Researchers’ was held as part of the ‘Excellence in Research Conference’ in September 2014. Staff new to teaching are provided with training in teaching, and supported is provided in the School by module and programme leaders. Staff new to research supervision undertake training provided by the Doctoral College. We will work with the University to promoting development opportunities in a more targeted manner to women (see Action K).

Career development

For each of the areas below, explain what the key issues are in the department, what steps have been taken to address any imbalances, what success/impact has been achieved so far and what additional steps may be needed.

(a)(i) Promotion and career development

Comment on the appraisal and career development process, and promotion criteria and whether these take into consideration responsibilities for teaching, research, administration, pastoral work and outreach work; is quality of work emphasised over quantity of work?

All staff including postdoctoral researchers participate in the annual appraisal cycle with their line manager, a senior academic in their discipline. Appraiser training is provided by the University, and local support is provided by the HR manager on the SEG. The appraisal addresses both short- and long-term career goals. The most recent Staff Survey (2013) showed that of the 32 respondents from the School, 27 (84%) had an appraisal in the previous 12 months, and 93% of these developed a written action plan as a result. However, only 64% stated that they found it useful. The issues for the School are to investigate, through interviews, how the system can be made more effective (**Action N**), particularly since many women report wanting enhanced mentoring provision (see Action J above). In parallel, the University will be running focus groups with staff to identify how managers can hold better career discussions during appraisals and how staff can be encouraged to proactively access available support, which will inform our investigation.

¹⁵ By November 2014, fourteen interviews of four staff (3F, 1M), four PGR students (3F, 1M) and six UG students (6F, 0M) had been completed. The interview programme is continuing; see Actions B, C, G, I, N and T.

The promotional process was discussed above in connection with Table 18. Equate permits staff to demonstrate high-level performance in a flexible subset of internal and external activities from a wide range which can include teaching, programme development, leadership and administration, pastoral support for students and early-career staff, supervision, research, budgetary responsibility and outreach. Promotional criteria for Readers and Professors include a similar range but with a stronger research focus. The School will encourage new female staff to set out a personal plan for promotion from the start of their appointment so they develop the expertise required strategically rather than haphazardly. The HR team is developing workshops to support staff applying for progression, which we will promote to our female staff (**Action O**).

All School roles and the time allocations that go with them are explicitly recorded in the School's workload plans, which are emailed directly to all academic staff. Staff are invited to discuss their roles both amongst themselves and with the Dean of School. We will conduct these discussions in the context of building up promotional cases strategically (Action O above), to ensure that female staff develop their cases across an appropriate range of activity in a timely fashion.

The School allocates typically £1200 - £1500 per year for each member of staff for participation in national and international conferences. Additional funds are often provided by request to the Dean, e.g. in 2012/13, five senior staff (1 female, 4 male) were allocated a further £400k for equipment, assistants and travel, of which female beneficiaries accounted for £97k. The School has successfully nominated and funded two female Senior Lecturers to participate in the Aurora Leadership Development programme; only 11 academic staff from the University have been selected, so winning two of the eleven places demonstrates the value placed by the School in this opportunity to develop women as academic leaders of the future. The School will continue to nominate women academics into this programme (**Action P**).

(a)(ii) Induction and training

– describe the support provided to new staff at all levels, as well as details of any gender equality training. To what extent are good employment practices in the institution, such as opportunities for networking, the flexible working policy, and professional and personal development opportunities promoted to staff from the outset?*

The induction programme includes compulsory E&D training and (since autumn 2014) Unconscious Bias Awareness training for all School staff. Academics new to teaching undertake a three day teaching induction ("CPAD"). Two recent female appointees, one coming from outside the UK and one entering university teaching for the first time after 10 years in industry, provided positive feedback on this induction as a way of discovering and understanding differences between UK and non-UK universities, and understanding what was expected from them. On their first day, new staff meet with colleagues, HR and their line manager/appraiser, and talk through a "quick start" guide to help them find their feet in the School. The guide sets out over timescales of days and weeks those contacts and matters that new staff should engage with, including mandatory and recommended training. A more comprehensive Staff Handbook (under revision) contains detailed information including flexible working, seminars, and training opportunities (e.g. research degree supervision training which also covers E&D issues including gender, pregnancy and parental leave).

The University-wide staff survey and one-to-one interviews in the School indicate that our local induction process needs to be developed further. In the response to the question "How satisfied were you with your local induction ...", only 9 (64%) of school-based participants were 'satisfied' or 'very satisfied', while 2 (14%) were not satisfied and 3 (21%) stated that they did not have a local induction. The last of these comments was the most disturbing. One male interviewee recognised that induction

"...is the same for both genders but might have a bigger impact for women".

We will ensure that all line managers use the local induction framework, and that the framework is improved, e.g. through discussing requirements with recently recruited staff (**Action Q**). The University has also commissioned an audit of local induction within STEM Schools (to conclude by Spring 2015).

(a)(iii) Support for female students

– describe the support (formal and informal) provided for female students to enable them to make the transition to a sustainable academic career, particularly from postgraduate to researcher, such as mentoring, seminars and pastoral support and the right to request a female personal tutor. Comment on whether these activities are run by female staff and how this work is formally recognised by the department.

First-year undergraduates attend *Small Group Tutorials* for academic and pastoral support. We ensure that no small tutorial groups contain only one woman. The same is true of small groups in the second year *Professional Skills* module. Laboratory groups are subdivided into pairs; a consultation conducted by the female student rep. ascertained that female students did not want to be placed in women-only pairs; students are nevertheless advised that they can request to change groups if they wish. As our lab cohorts are small, with typically only 20 students per laboratory session, academics leading the labs can ensure that the dynamics of each student pair are supportive.

PGR students have shared open-plan offices, typically with 5-6 students per 30 m² room, helping ensure that female students form a community of scholars at the same career stage. The Researcher Development Programme (mentioned earlier) enhances PGR skills and helps them prepare for writing papers, thesis submission and postdoctoral life.

Students and supervisors are encouraged to meet weekly, or more often when required, to establish a good rapport and to train students to be researchers. The supervisor acts as mentor, and as students have two supervisors in the School plus ready access to the School's PGR Tutor (who manages the PGR induction and training programmes), and to the Dean of School, they have a network of support close to hand. Planning of training/ conference/ field work activity etc. are all discussed and approved by the supervisor. Annual monitoring meetings between each student and the PGR Tutor ensure that appropriate support is being received. When students raise concerns, they are acted on; twice in the last five years, female PGR students have changed supervisors, and on both occasions they successfully completed their PhDs.

Students and staff meet formally and informally in a shared Discussion Room within the School, which is used for social/coffee and research discussions, establishing a sense of community. One female final year PhD student commented in interview with the Athena SWAN Officer:

"I have a large circle of female friends. This room [The Discussion Room] is very good for meeting and having lunch together. I am still in touch with those who have now graduated. We really connect on a level I have never experienced".

The main (astrophysics) seminar programme ranges from formal weekly invited talks to semi-formal weekly lunchtime talks and less formal weekly journal club talks. The journal club is run by PGR students for students and postdocs only (at their request) so that they have an environment in which to practice speaking professionally without their supervisor looking on. (See also Table 22 below.)

The female percentage of visiting speakers (Table 19 and Figure 8) is in the range 24-35%, i.e. at or above the national average for women in physics, i.e. 20-25%. The EC/SAT will continue to monitor this figure, to ensure that women scientists receive the recognition that invited seminars bring, and to target 50% female speakers to profile women taking leading roles in the field (**Action R**).

Academic year	Organiser gender	Female speakers	Male speakers	Female %
2011/12	M+M	6	18	(25±10)%
2012/13	M+F	6	19	(24±10)%
2013/14	M+F	11	20	(35±11)%
2014/15 (Sem. A)	M+M	3	8	(27±16)%

Table 19. External speakers at the main (astrophysics) research seminars.
Source: Seminar calendar entries

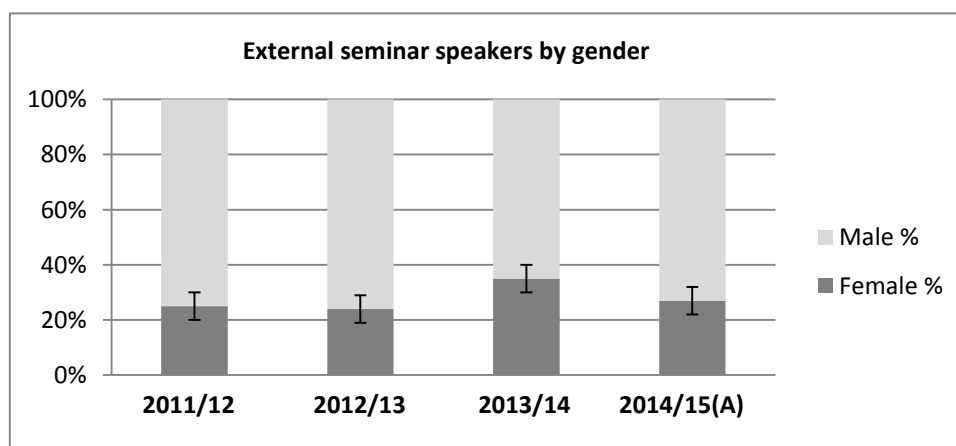


Figure 8. Female percentage amongst external seminar speakers

Postgraduates give seminars at the end of their first and second years. One female PhD student suggested in a 2014 E&D interview that it would be beneficial to set up practice talks for less confident, less experienced students to make their first talk less daunting. Most supervisors already do this, along with mock vivas, but the School (at a School Meeting) has agreed to offer every student these opportunities (**Action S**).

The School's recently formed Women in Science Network arranged a School-funded 'Get to know each other' lunch for all women (postgraduate, postdoctoral, academic and administrative) in the School in November 2014. This will become a six-monthly networking event and will identify what other activities would be useful, starting with events proposed by the EC/SAT (**Action T**). The Network will run an 'Achieving Your Ambitions' workshop for female postgraduates and postdocs about confidence building, led by the SEPnet Diversity Director (**Action U**). The Women in Science Network maintains close links to PhySoc, a student-led society founded by two female undergraduates. While the Chair, co-Chair and Events Manager for the society are women, both male and female students are involved in the operation of the society. The society organises talks

and social events aimed at bringing UG and PGR students and staff together to facilitate networking and, as one co-founder suggested in interview,

“get everyone talking to each other”.

Members of PhySoc currently attend Open Days and have extensive ‘chats’ with female prospective students and their parents to highlight female involvement in the society and inform prospective students of the support they offer to current students.

Organisation and culture

Provide data for the past three years (where possible with clearly labelled graphical illustrations) on the following with commentary on their significance and how they have affected action planning.

For each of the areas below, explain what the key issues are in the department, what steps have been taken to address any imbalances, what success/impact has been achieved so far and what additional steps may be needed.

(a)(i): Male and female representation on committees

– provide a breakdown by committee and explain any differences between male and female representation. Explain how potential members are identified

The main decision-making committee (see Table 20; see also Figure 1) is the SEG. The School has three other major forums for staff and student input: the SAC which has staff and student representatives concentrating on formal governance matters; the Programme Committee which is the major staff-student forum; and the School Meeting which included all academic staff and is the major staff forum. These four forums have standing items on E&D to prompt discussion of gender issues.

The Programme Committee has the same academic membership, plus two student representatives from each year of each undergraduate programme; the aim is to appoint one male and one female representative in each category, though in detail this varies from year to year depending on levels of interest (see Table 20). The gender balance in the Programme Committee therefore primarily reflects that of the (predominantly male) staff, moderated by a more even balance amongst student representatives.

The SEG and the SAC are populated based on specified roles within the School, and have slightly higher female participation than the School Meeting and Programme Committee. The EC/SAT will monitor these bodies to ensure female participation levels are maintained and enhanced when possible (**Action V**).

Committee	Members	Year (Sept)	Female #	Male #	Female %
School Executive Group (SEG) (4 meetings per year)	From 2012/13: Dean (M); 3 Associate Deans (Learning and Teaching (M), Academic Quality (M), Research (F)), Head of Research Institute (M); Admissions Tutor (M), Finance (FM), HR (F), Administration (F). From 2013/14: + Health & Safety (M), [From 2014/15: + Chair of EC/SAT (M), Research Centre Directors (FM), change of AD-R(M)]	2012	4	5	44%
		2013	4	6	40%
		2014	4	7	36%
School Academic Committee (SAC) (4 meetings per year)	Dean (M); 3 Associate Deans (Learning and Teaching (M), Academic Quality (M), Research (F), Heads of Subject (MM); Programme Tutors (FMM), Admissions Tutor (M), Academic Quality(F), Governance (F), Registry(F)), Information Services(F), Administration (F), PG Tutor(M), Staff Rep(M), Student Reps(MFM).	2012	8	11	42%
		2013	8	12	40%
		2014	8	12	40%
Programme Committee (2 meetings per year)	Academic Staff + undergraduate Student Reps	2012	12+6	41+9	26%
		2013	9+11	44+7	28%
		2014	6+11	43+9	25%
School Meeting (3 meetings per year)	Academic Staff above postdoctoral level	2012	12	41	23%
		2013	9	44	17%
		2014	8	43	16%

Table 20. Gender balance of main decision-making committees, at survey points in September

(a)(ii) Female:male ratio of academic and research staff on fixed-term contracts and open-ended (permanent) contracts

– comment on any differences between male and female staff representation on fixed-term contracts and say what is being done to address them.

The gender split of staff across permanent and fixed-term contracts (Table 21) largely mirrors the split between academics and early-career researchers respectively. Male and female permanent staff numbers have remained reasonably steady over three years. The female fixed-term category, on the other hand, has decreased from 38% to 12% (see Figure 9), as several major research grants have ended during this period, on which a larger proportion of young women scientists were employed, while at the same time the loss of male fixed-term early career researchers was offset by the arrival of male researchers holding national Fellowships (one Royal Society Fellowship and one Royal Astronomical Society Fellowship amongst them). This outcome underscores the necessity that we:

- (1) attract women scientists to apply for national fellowship to be held at the University of Hertfordshire (see Action H, discussed above), and
- (2) investigate progression from very-early career fellowships to help retain young women scientists (see Actions J and O, discussed above).

	Sep 2012			Sep 2013			Sep 2014		
	Female	Male	Female%	Female	Male	Female%	Female	Male	Female%
Perm.	6	31	16%	7	34	17%	7	35	17%
Fixed	9	15	38%	5	17	23%	2	15	12%
Total	15	46	25%	12	51	19%	9	50	15%

Table 21. Gender split across permanent and fixed-term contracts

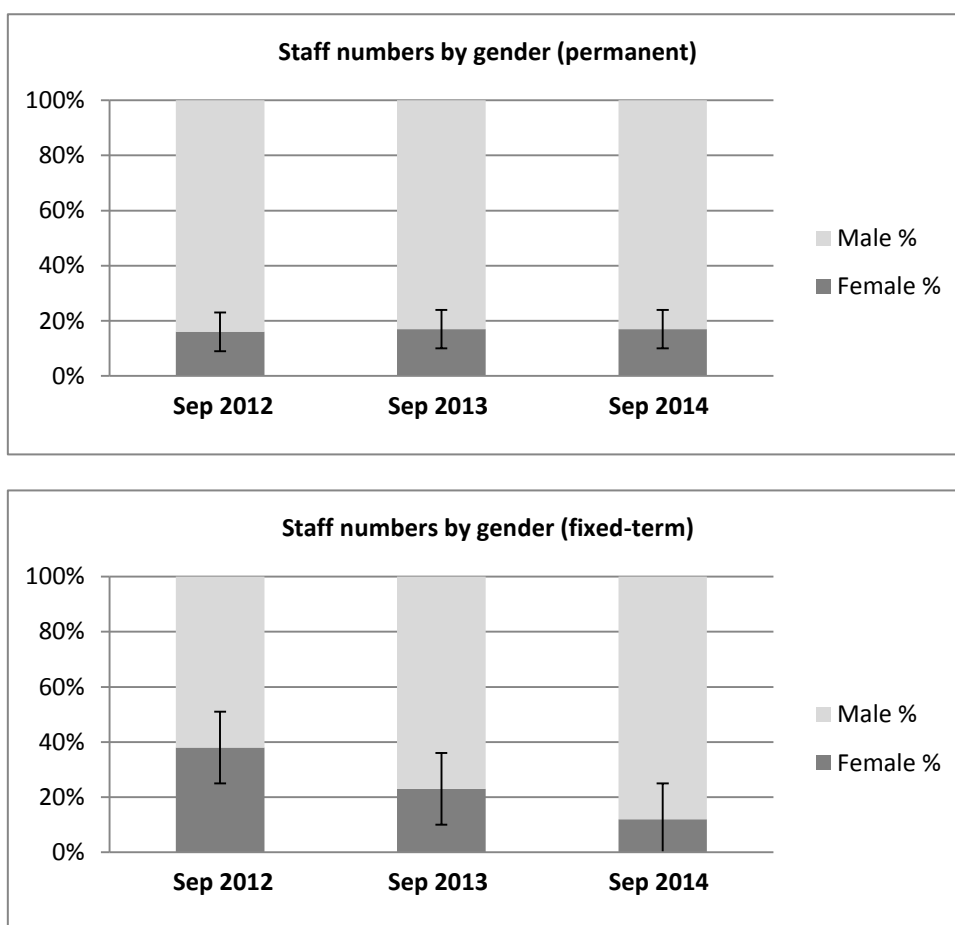


Figure 9. Gender split of staff on (upper) permanent and (lower) fixed-term contracts

(b)(i): Representation on decision-making committees

comment on evidence of gender equality in the mechanism for selecting representatives. What evidence is there that women are encouraged to sit on a range of influential committees inside and outside the department? How is the issue of 'committee overload' addressed where there are small numbers of female staff?

The population of the committees was described above in connection with Table 20. Staff undertaking School committee work have this reflected in their role allocation in the workload model described below. External committee work, e.g. for STFC panels or journal refereeing, is associated either with UH roles or the scientific community element within the research allocation (which is how staff, following discussions, chose to credit this activity).

(b)(ii) Workload model

describe the systems in place to ensure that workload allocations, including pastoral and administrative responsibilities (including the responsibility for work on women and science) are taken into account at appraisal and in promotion criteria. Comment on the rotation of responsibilities e.g. responsibilities with a heavy workload and those that are seen as good for an individual's career.

The School workload model is emailed to all academic staff, from early draft through to in-term revisions. All data, including allocations for research, teaching, administration, scholarly community (including Athena) and outreach, are transparent. Staff are invited to discuss it with the Dean of School at all stages of its evolution. The annual appraisal discussion includes current work and future development, and whether different roles might facilitate their career progression. For example, a female Lecturer who had been in post for two years took on link tutor responsibilities for the Joint Honours programme, which then became part of her successful case for promotion to Senior Lecturer. Likewise, a lecturer from overseas took on responsibility for chairing our Industrial Liaison Committee as a way of developing UK network links, and this similarly formed part of a successful promotional case to Senior Lecturer. Staff taking on such responsibilities may do so for defined or undefined periods as suits their career plans, e.g. in 2012 a female academic took on a senior leadership role, nominated a two year term of office during which her teaching load was reduced, and in 2014 she gave up that role as planned in order to prioritise her other work.

As discussed under Career Development, the promotional criteria permit staff to cite a range of activities which can include teaching, programme development, leadership and administration, pastoral support, supervision, research, budgetary responsibility and community engagement.

(b)(iii) Timing of departmental meetings and social gatherings

– provide evidence of consideration for those with family responsibilities, for example what the department considers to be core hours and whether there is a more flexible system in place.

School meetings and seminars take place between 10:00 am and 4:30 pm, in many instances finishing by 3:30, to cater for staff with childcare responsibilities. School social gatherings usually also fit these hours, including weekly departmental coffee and lunches with visiting seminar speakers. (See also Table 22.) Where possible we avoid scheduling key meetings during the Hertfordshire school half-term weeks, to include staff with childcare responsibilities.

(b)(iv) Culture

–demonstrate how the department is female-friendly and inclusive. 'Culture' refers to the language, behaviours and other informal interactions that characterise the atmosphere of the department, and includes all staff and students.

Independent staff surveys were conducted in 2010, 2012 and 2013. Survey data and one-to-one interviews by the Athena SWAN Officer of four staff, four PGR students and six UG students, indicate that the School is a welcoming place to work. As one research fellow (male) suggested:

“It is a friendly and welcoming school. If I had a concern I would really go to people. There is no issue of approaching. It is an equal place to work”.

Results from the 2013 Staff Survey showed that of the 38 School individuals who participated, 74% ‘agreed’ and 24% ‘tended to agree’, i.e. 98% total, that their team leader/line manager/immediate supervisor is approachable. 100% of School respondents ‘agreed’ or ‘tended to agree’ that the ‘University is committed to equality of opportunity regardless of their gender identity’. Similarly, 75% of School respondents agreed that they are ‘satisfied with their level of awareness of diversity issues and how to react appropriately with colleagues’. Members of the School find it to be committed to equality of opportunity regardless of gender.

Widespread individual commitment to equality was evident from the number of men and women involved as members of the EC/SAT or as interviewees. The requirement for all staff to attend E&D training in Induction and Unconscious Bias Awareness training makes it clear from the start that the School expects staff to support gender equality. The Dean of School was a founding member of both the School EC/SAT and the University SAT, and has supported flexible working in a number of forms, including agreeing formal and informal variations of hours to accommodate caring responsibilities (see below), creating an additional academic post to enable husband and wife academics to take up appointments in 2012, and making an identical offer to another husband and wife team. Two female staff are currently leave of absence to enable them to accompany academic husbands spending extended periods overseas. A recent (2014) academic appointment was re-scoped from full-time to “0.5 to 1.0 FTE” prior to advertising, to build in flexibility from the start of the appointment; ultimately this post was filled by a woman returning to work at the end of a career break who would not have applied for a traditional full-time post.

We have a range of activities that encourage interactions between staff and PGR students, and establish an inclusive atmosphere (Table 22). All events are attended by both genders, except for the women-only “Get to know one another” event run as part of the Women in Science Network.

Event	Purpose	Attendees	Every when
Tuesday morning coffee	Social	All staff and PGR students	weekly, Tuesday 10:30
Friday Lunchtime seminars	Semi-formal local seminar presentation	All academic staff and PGR students	weekly, Friday 1-2 pm
Astronomy seminar series	Formal seminar presentation	All academic staff, and PGR and MPhys students	weekly, Wednesday 3 pm
Journal Club	Discuss selected journal paper	Post docs and PGR students	fortnightly, Friday 10-11 am
Get to know one another	Social activity early in academic year	All female staff and PGR students	November (from 2014)

Table 22. Activities promoting interactions between staff and students

PGR students share offices of typically 5-6 students. Thus they have dedicated work space but also the opportunity to interact with each other. The School currently occupies two adjacent buildings, and is progressively moving all PGR students into just one building with astrophysics staff, to improve opportunities to associate and communicate (**Action W**). The importance of this was described by a female postgraduate:

“Where PhD students are placed is really important. For example, everyone in my office knew about a certain upcoming conference. Others didn’t because they were sat in a different office. So lots of thought needs to be invested into how to group students. A good idea would be to mix the year groups, so that you can get help from more experienced students.”

Non-confidential minutes from all School meetings are made available to all staff via email (School Meeting, SAC, SEG) and to students and staff via the student intranet (StudyNet).

The target of 50% female visiting seminar speakers (see Action R) will help raise the profile of women scientists in the School, impacting positively on its culture.

The School hosted a visit from Prof. Averil Macdonald, Diversity Director for SEPnet, in 2013 to discuss E&D. As a result, the School is generating a series of posters portraying the expertise of female (and male) staff (**Action X**), possibly more for the benefit of female students and staff, to see more images of women doing science to build the sense of science community. Prof. Macdonald also advised the School on the gender constitution of student tutorial groups which resulted in the practice since 2013/14 of ensuring that no small tutorial groups were created with only one female member.¹⁶

(b)(v) Outreach activities

– comment on the level of participation by female and male staff in outreach activities with schools and colleges and other centres. Describe who the programmes are aimed at, and how this activity is formally recognised as part of the workload model and in appraisal and promotion processes.

One (male) member of staff (on a flexible 0.2 FTE contract) leads physics outreach, while one (female) member of staff (on a flexible 0.6 FTE contract) leads mathematics outreach through the Further Mathematics Support Project. An additional member of staff (male) has 0.4 FTE for outreach, by virtue of holding an STFC Public Engagement Fellowship and leading astronomy open-nights. These allocations are explicit in the workload model. Many other staff and postgraduates contribute significantly to outreach, leading to retrospective staff workload recognition and payments to students. Outreach delivery is therefore a mix of staff and PGR gender fractions. Eighteen percent of the PGR-student-led visitor programme at the Observatory in 2010/11-2012/13 was delivered by female PGR students (22% of the PGR body).

Outreach is aimed at a wide range of participants including families with individuals aged 5-80 years at observatory open nights (catering for 2000-2500 visitors per year), community groups (e.g. scouts, brownies, U3A), and schools. From 2010/11-2012/13, 54% of group visits were female. The Women in Science activities include outreach targeting girls in secondary schools around Hertfordshire, led by women postgraduates who will encourage young women to consider STEMM careers (**Action Y**).

¹⁶ Professor Dame Athene Donald likewise comments, “Where women are in a minority, they can feel very isolated.”[“Where are the Women?”, talk given 2013]

Flexibility and managing career breaks

a) Data and commentary

Provide data for the past three years (where possible with clearly labelled graphical illustrations) on the following with commentary on their significance and how they have affected action planning.

(i) Maternity return rate

– comment on whether maternity return rate in the department has improved or deteriorated and any plans for further improvement. If the department is unable to provide a maternity return rate, please explain why.

Over the last three years, only one member of staff (Senior Lecturer) took maternity leave. That individual took a full year on leave, then returned full-time. With such small numbers involved, it is not possible to meaningfully discuss improving or deteriorating rates.

(ii) Paternity, adoption and parental leave uptake

– comment on the uptake of paternity leave by grade and parental and adoption leave by gender and grade. Has this improved or deteriorated and what plans are there to improve further.

Over the last three years, two members of staff (one Associate Dean and one Reader) took formal paternity leave, one taking the minimum 10 days and the other taking 3 months. Through these senior members of staff taking paternity leave, men and women in the School are aware that the School encourages staff to take leave associated with new families. Another member of staff (Principal Lecturer) has formalised paternity leave for 2015. The School also makes extensive use of informal flexible working, as discussed below.

(iii) Numbers of applications and success rates for flexible working by gender and grade

– comment on any disparities. Where the number of women in the department is small applicants may wish to comment on specific examples.

Staff may formally request flexible working on a long-term basis via a request to HR, for a single academic year, affecting timetabling, via the Dean, or may use informal flexible working for limited periods of time. In connection with the last of these, the University does not stipulate fixed working hours for academic staff, so staff can (and many do) adjust their hours around childcare and similar commitments. Formal arrangements are recorded in Tables 23 (for HR records) and 24 (for class-timetabling constraints). These provide independent snapshots into formal arrangements.

The number of women working flexible hours in 2013 dropped due to one retiring and the one coming to the end of an externally-funded fixed-term research post. No requests have been turned down over the last four years.

Year	Female	Male	Female %
2010/11	2	5	28%
2011/12	2	4	33%
2012/13	2	4	33%
2013/14	0	5	0%

Table 23. Staff working formal (HR-recorded) flexible hours

Year	Female	Male	Female %
2013/14	1	6	14%
2014/15	1	6	14%

Table 24. Staff with formally agreed class timetabling constraints (new from 2013/14).

b) Issues and steps taken

For each of the areas below, explain what the key issues are in the department, what steps have been taken to address any imbalances, what success/impact has been achieved so far and what additional steps may be needed.

(i) Flexible Working

– comment on the numbers of staff working flexibly and their grades and gender, whether there is a formal or informal system, the support and training provided for managers in promoting and managing flexible working arrangements, and how the department raises awareness of the options available.

The take up of *formal* flexible working was presented above (Tables 23 and 24). An invitation to request flexible timetabling is made annually. The use of *informal* flexible working was evidenced through one-to-one interviews by the Athena SWAN Officer, which have revealed that flexible working is strongly supported within the School. A range of individuals had flexible working patterns in place that they had agreed with the Dean. Examples include Senior Lecturers (male and female) regularly taking days of annual leave during the term to add flexibility to full-time contracts, while another female member of staff (Research Fellow) stated that:

“On Friday my son has piano and I have to take him, so my line manager is happy with me leaving earlier.”

(ii) Cover for maternity and adoption leave and support on return

– explain what the department does, beyond the university maternity policy package, to support female staff before they go on maternity leave, arrangements for covering work during absence, and to help them achieve a suitable work-life balance on their return.

The member of staff who took maternity leave planned and used paid “keep in touch” days to maintain involvement in her research networks during her absence. Upon her return to work, teaching was confined to three days to give her greater scope for informal flexible working. Upon return to work, she was allocated similar teaching duties to those she undertook before going on leave, to avoid the need for new preparation and thus to allow a ramping up her research with minimal loss of momentum. Accrued annual leave provided added flexibly over the year, and additional unused annual leave was carried over to the following leave year.

Another member of staff (Senior Lecturer) was on maternity leave from another university when she was appointed. Her start date was postponed until she was ready to join, and at her request she was appointed initially to a 0.5 FTE contract for six weeks, to permit a slower ramp-up to full-time, to assist with her transition into work and her child’s into childcare.

The University is setting up briefings for line managers on supporting staff on maternity leave, covering absences and facilitating successful return to work plans, and will offer drop-in sessions for new mothers returning to work.

[4926 words]

5. Any other comments:

maximum 500 words

Please comment here on any other elements which are relevant to the application, e.g. other SET-specific initiatives of special interest that have not been covered in the previous sections. Include any other relevant data (e.g. results from staff surveys), provide a commentary on it and indicate how it is planned to address any gender disparities identified.

As the staff profile in the School is physics dominated, we are also engaged with the Institute of Physics (IoP) Juno programme. The School declared itself a Juno “Supporter” in late 2012, which was acknowledged by the IoP in early 2013. In autumn 2014 we submitted a Juno “Practitioner” application which is currently under consideration, and we are undertaking actions which take us on the journey towards, ultimately, Juno “Champion” status. The Athena and Juno frameworks together have helped focus minds in the School, and in the wider University, on the pursuit of gender equality in fields – physics, astronomy and mathematics – which traditionally were, and today still are, male dominated. The award of Athena SWAN Departmental Bronze recognition, if we are successful, will not be the end of our journey but will provide assurance to members of the School that the steps taken so far have been endorsed externally and that the efforts to strengthen women’s opportunities in physics, astronomy and mathematics, for the benefit of both staff and students, can be pursued with increased vigour toward Athena SWAN Departmental Silver and Juno Champion awards.

[185 words]

6. Action plan

Provide an action plan as an appendix. An action plan template is available on the Athena SWAN website.

The Action Plan should be a table or a spreadsheet comprising actions to address the priorities identified by the analysis of relevant data presented in this application, success/outcome measures, the post holder responsible for each action and a timeline for completion. The plan should cover current initiatives and your aspirations for the next three years.

The action plan does not need to cover all areas at Bronze; however the expectation is that the department will have the organisational structure to move forward, including collecting the necessary data.

Action point	Aim of Action	Action plan	Actions already taken	Timescale	Success Measures	Responsibility
A	Make environment more welcoming to female UG students	Ensure Open Days have female staff <i>and</i> student ambassadors	Open Days have female staff <i>or</i> student ambassadors	January 2015 and thereafter	All open days have female staff and student ambassadors	Admissions Tutor
B	Make environment more welcoming to female UG students	Interview UG students in order to gain qualitative information on their perceptions of E&D in the School	6 interviews with female UG students have already been conducted.	April 2015	Interview 20% of female UG students by April 2015	Athena SWAN Officer
C	Make environment more welcoming to female UG students	Interview part-time UG students to increase our understanding of their choice relating to mode of study and determine whether they feel they have adequate support structures in place at school level		May 2015	Interview all female p/t UG students	Athena SWAN Officer

D	Increase attractiveness of School to female PGR students	Review webpages and PGR recruitment process to ensure they encourage female students, e.g. highlighting the flexibility involved in being a research student, and the supportive environment in School. Participate in PG STEM Open days (female member of staff present). Monitor recruitment by gender. Organise annual talk to 3 rd and 4 th year UG students, carried out by female PhD students and Postdocs.	School's E&D Webpage includes PGR student profile	Review PGR webpages and open days: February 2015. Women in Science talks to UG students: start from February 2015 and thereafter	Sustained Increase in proportion of female PGR students	EC/SAT (KC) + PGR Tutor; Women in Science Network
E	Develop School culture that promotes the recruitment, development, retention and promotion of female students and staff	Staff and optionally PGR students to undertake Unconscious Bias Awareness training; all staff involved in recruitment to undertake enhanced E&D "Recruitment and Selection" course	34 academic & research staff, 4 administrative and technical staff, and 3 PGR students have undertaken Unconscious Bias Awareness training.	summer 2015	100% of staff trained by summer 2015	EC/SAT (SGR)
F	Ensure equality of opportunity, realised through progression and achievement, for female UG students	Monitor fraction of female graduates achieving 1 st and 2:1 degrees	Data collected up to September 2014.	July 2015 and thereafter	Proportion of female students achieving "good" degrees is at least as high as for male students.	EC/SAT (SJK)
G	Ensure equality of opportunity, realised through progression and achievement, for female PGR students	Monitor fraction of female PGR students completing their degrees and average time to completion. Continue to interview female PGR students to assess needs	4 PGR interviews conducted summer 2014.	December 2015 and thereafter	Proportion of female students completing and average time to completion is at least as good as for male students.	EC/SAT (JED and KF?)

H	Increase number of female early career researchers holding Fellowships in School	Through scientific networks, actively encourage women scientists to apply for national Fellowships to hold in School, e.g. by emphasising family-friendly practices, induction and mentoring, on-site training, nursery etc.	Women staff profiles on School webpages	summer 2015 and thereafter	Number of female Fellowship bids (i) made and (ii) successful	EC/SAT (JED)
I	Develop School culture that promotes the recruitment, development, retention and promotion of female staff	Interview all women at Senior Lecturer level to ensure they are aware of promotional processes and criteria	1 interview with female Senior Lecturer carried out.	May 2015.	50% of women SLs interviewed by winter 2014/15; 100% by spring 2015	EC/SAT (KF)
J	Develop School culture that promotes the recruitment, development, retention and promotion of female staff	Work with the University SAT to provide mentoring for all women on fixed term contracts to ensure they are supported in bidding for funding extensions prior to the end of their contracts; Establish a Women in Science mentor for all women in the School	Postdoctoral researchers included in appraisal framework; mentor participating in Aurora Leadership Development Programme 2014/15	summer 2015	Starting summer 2015; mentoring opportunities taken up and valued	EC/SAT (EH)
K	Develop School culture that promotes the recruitment, development, retention and promotion of female staff	Review annual promotions (Table 18) and ensure line managers support the development of promotional cases for women scientists from day-one of their career. Promote development opportunities for female staff.	School induction programme exists (but is not universally used)	Summer 2015 and thereafter	Record of promoting women academics at least as good as for male staff; Increase in number of female staff undertaking development training/sessions.	EC/SAT & SEG (SGR)

L	Develop School culture that promotes the recruitment, development, retention and promotion of female staff	Review job descriptions and advertisements in appointments to ensure women are encouraged to apply and to consider whether FTE flexibility can be allowed and advertised. Monitor subsequent application, shortlisting and appointment data by gender	SEG has agreed to implement this	December 2014 and thereafter	Female percentage of applicants, increases from pre-2015 data; female percentage of appointees increases in response to attracting excellent applicants	EC/SAT & SEG (SGR)
M	Develop School culture that promotes the recruitment, development, retention and promotion of female staff	Ascertain effectiveness of efforts to attract more women applicants by gathering feedback via expanded equal opportunities monitoring questionnaire	Questionnaire exists and is used; need to modify it	review summer 2016	HR form changed (summer 2015) and anonymised data collected and made available (summer 2016)	EC/SAT & HR
N	Develop School culture that promotes the recruitment, development, retention and promotion of female staff	Interview staff to find out what changes would make the appraisal system more highly valued and effective	84% of staff report having an appraisal in 12 months prior to 2013 staff survey	summer 2015	Appraisal scheme assessed	EC/SAT & SEG (SGR, KF)
O	Develop School culture that promotes the recruitment, development, retention and promotion of female staff	Encourage new female staff to set out a personal plan for promotion from the start of their appointment so they develop the types and level of expertise required to build their promotional case strategically; Promote University promotion workshops to our female members of staff.		spring 2015	Record of promoting women academics at least as good as for male staff	EC/SAT & SEG (SGR)
P	Develop School culture that promotes the recruitment, development, retention and promotion of female staff	Nominate and fund female academics to participate in the Aurora Leadership Development programme	School staff have taken two of eleven University places in 2013/14 and 2014/15	summer 2015 and thereafter	One nomination submitted and successful each year	EC/SAT & SEG (SGR)

Q	Develop School culture that promotes the recruitment, development, retention and promotion of female staff	Ensure that all line managers use the existing induction framework, and the existing framework is improved, e.g. through discussing requirements with recently recruited staff	Local induction framework exists (but not universally adopted)	spring 2015 and thereafter	100% of staff receive formal local induction	EC/SAT & SEG (SGR)
R	Promote positive view of female scientists	Invite higher proportion of female visiting seminar speakers	Female percentage exceeds national staff percentage	summer 2016	50% of seminar speakers are women	EC/SAT (JD, XK, EH)
S	Ensure equality of opportunity, realised through progression and achievement, for female PGR students	Ensure practice presentations and mock vivas are offered as standard practice by all PGR supervisors.	Agreed by School in School Meeting; now implement	summer 2015	all PGR students offered practice presentations and mock vivas	EC/SAT (JED); PGR Tutor
T	Promote positive view of female scientists	Identify (via focus group organised by the Women in Science Network) what events female staff and PGR students would regard as beneficial.	"Get to know each other" lunch organised by School Women in Science Network held Nov 2014	winter 2014/15	List of Women in Science activities confirmed by EC/SAT	EC/SAT (NH)
U	Develop School culture that promotes the recruitment, development, retention and promotion of female staff & Ensure equality of opportunity, realised through progression and achievement, for female PGR students	Run an 'Achieving Your Ambitions' workshop for female postgraduates and postdocs about confidence building,		winter 2014/15	Event held with good attendance	EC/SAT (NH)

V	Develop School culture that promotes the recruitment, development, retention and promotion of female staff	Ensure women are embedded in School decision making	Female percentage on committees is representative of discipline or higher – but discipline percentage is low	ongoing, as opportunities arise to replace current members	Female percentage of positions on School committees exceeds School makeup	EC/SAT, Dean
W	Develop School culture that promotes the recruitment, development, retention and promotion of female staff & Ensure equality of opportunity, realised through progression and achievement, for female PGR students	Move all CAR staff and PGR students into one building, to improve opportunities to associate and to improve communications	Academic staff moves completed, half of postdocs and half of PGR students moved	Complete move of CAR postdocs by Jan 2016; complete move of CAR PGR students by October 2016	All of CAR in Innovation Centre	SEG (SGR)
X	Promote positive view of female scientists	Generate a series of posters portraying the expertise of female (and male) staff.		autumn 2015	Poster series produced and exhibited in School	EC/SET (SGR)
Y	Promote positive view of female scientists	Develop outreach programme targeting girls in secondary schools around Hertfordshire	Large female fraction of PGR students present at Observatory Open Nights	autumn 2015	Outreach events taking place and receiving positive evaluations	EC/SAT (NH)