Executive summary

We are pleased to present the progress that we have made against our Practitioner action plan, that we believe demonstrates that we are champions for equality within the Open University and the wider Physical Sciences community. To this end, we report the following highlights, with contributions from staff across DPS:

Principal 1 – Robust organisational framework

- In light of increased staff awareness of equality issues, E&D has been embedded within the portfolio of one deputy Head of Department (dHoD) and the Juno/Athena SWAN Team (JAS) co-Chair is now a member of the departmental Extended Leadership Team. E&D is therefore explicitly represented at all levels of department management.
- Administrative and secretarial support for JAS activities is now included in the job description of a departmental secretary, with Juno-related tasks used as part of the interview selection process.
- The department has made a financial commitment to JAS activities, including funding an undergraduate to attend a Women in Physics conference (something that as a distance-learning institute we would not normally do) and supported staff, including those not on the JAS team, to attend E&D meetings nationally.
- Analysis of the Practitioner data, led to the formation of a project (outside the JAS team) to investigate the success of women on Level 2 Physics. The project team includes one of our Associate Lecturers (ALs) and was funded by eSTEeM (OU Centre for STEM Pedagogy). The results of this have been presented at national conferences and drafted for publication and it has influenced the design of assessment and support in the physics curriculum.
- In light of Practitioner data, a member of the JAS team completed an investigation into gendered patterns of achievement in Masters-level modules, which has been shared with the Masters programme director.
- After problems obtaining staff data, one JAS co-chair worked with University HR team to embed the production of monitoring reports for staff data into their work stream, with data now provided automatically to all STEM departments across the University.

Principal 2 – Appointment and selection processes

- One JAS team member and the Faculty’s Deputy Associate Dean for Postgraduate Studies successfully lobbied the University to offer E&D training to PhD students via the OU’s Virtual Research Environment.
- The Head of Department (HoD) mandated recruitment training for all members of selection/interview panels (including PhD recruitment), a departure from University policy.
- The HoD mandated mixed gender panels for selection/interviewing, a departure from University policy.
- The PostGraduate Tutors (PGTs) introduced a centralised process for PhD applications and a panel interview format. This process is monitored for the gender composition of panels.
The Department Administrator reviewed our external web profile and ensured active images of women in STEM were included throughout to show the inclusive nature of the department.

An equality and diversity statement has been added to all DPS job adverts, and we are lobbying to have the Juno and Athena SWAN logos added.

There has been an increase in the proportion of women in research roles.

There has been an increase in the proportion of women taking PhDs.

Principal 3 – Departmental structures and systems

- The number of staff completing the Career Development and Staff Appraisal (CDSA) process increased as a result of JAS team members communicating the benefits of the process in department newsletters and at department meetings.
- The HoD introduced an annual CV submission system to ensure management are aware of individual staff achievements and capabilities.
- One JAS co-chair and other members of DPS became involved in a project with the Department of Maths and Statistics to investigate why the regional academic role preferentially attracts women.

Principal 4 – Promote an inclusive culture

- We ensured the JAS team was inclusive of all staff roles by inviting a regional academic, a member of academic-related staff, and a representative of the DPS social society “Hooke Soc” to join the team.
- One JAS team member completed a project into gendered workload patterns across research, teaching and administrative duties that informed 2015/16 workload allocation.
- Increased the number of women giving research seminars in the department.

Principal 5 – Flexible approaches and provisions

- The Department Administrator communicated to all staff the roll-out of the new ‘agile working’ policy and changes to parental leave.
- Although flexible working is embedded in the OU ethos, we have ensured that information about this is available to staff via our E&D intranet.
Contents

1. Introduction to The Open University .................................................. 6
2. Introduction to the Department ......................................................... 7
   2.1 Members of DPS ........................................................................ 8
   2.2 Organisation of DPS research .................................................... 12
   2.3 Organisation of DPS teaching .................................................... 13
   2.4 The JAS SAT Team .................................................................. 15
   2.5 Challenges faced ...................................................................... 16
3. Progress since Practitioner against Principles ....................................... 18
   3.1 Establish organisational framework ............................................ 18
   3.2 Monitoring and evidence base .................................................... 22
   Principle 2 ...................................................................................... 42
   2.1 Ensure that processes and procedures are fully inclusive .......... 42
   2.2 Take positive action to encourage under-represented groups to apply for jobs ................................................................. 47
   Principle 3 ...................................................................................... 51
   3.1 Transparent appraisal and development .................................... 51
   3.2 Transparent promotions processes and procedures ................ 57
   Principle 4 ...................................................................................... 61
   4.1 Promote an inclusive culture .................................................... 61
   4.2 Transparent workload allocation model .................................... 70
   Principle 5 ...................................................................................... 76
   5.1 Support and promote flexible working practices ...................... 76

Appendix A – Why do women do less well on some of our physics modules? ................................................................. 81
Appendix B - Overview of Science MSc Gender Statistics: 2009/10 - 2013/14 ................................................................. 88
Appendix C - JAS discussion paper – Recruitment in DPS .................. 91
Appendix D - JAS discussion paper – CDSAs in DPS .......................... 97

Table of Figures
Figure 1 DPS structure and positions of responsibility pre-July 2015. Arrows show line management responsibilities for academic staff. PGTs and JAS co-chairs reported directly to the HoD. Discipline structures reflect that DPS was formed from a merger in 2012 of a department and a research institute: the Planetary and Space Sciences Research Institute (PSSRI) and the Department of Physics and Astronomy (P&A). Red-dashed boxes show members of the JAS team. ....................................................... 7
Figure 2 Positions of responsibility within DPS post-July 2015. Arrows represent line management of academic staff; PDRAs and other staff may have other arrangements. Note that only one JAS co-chair and one PGT sits on ELT at any one time, but the structure is such that these two roles have allocated deputies who can also attend ELT if needed. Red-dashed boxes show members of the JAS team. ............. 8
Figure 3 Members of DPS by role (March 2015) .................................. 10
Figure 4 Distribution of (left) men and (right) women within roles in DPS .......................................................... 10
Figure 5 The Robert Hooke Building, which houses most staff in the Department of Physical Sciences. 12
Figure 6 DPS Equality and Diversity external facing webpage. http://www.open.ac.uk/science/physical-science/equality-and-diversity ......................... 20
Figure 7 DPS Equality and Diversity intranet. Items linked from here include links to CDSA documentation, Recruitment and Selection Training, Staff LMS, Equality and Diversity training, Agile working policy, Careers Advisory Service ................. 20

Tables
Table 1 Comparison between March 2013 (Juno Practitioner) and March 2015 data for job roles across DPS. Note that academic-related staff were not part of the DPS staff in 2013. ................................. 11
Table 2 Module Team Chairs within the physical sciences curriculum .......................................................... 14
Table 3 DPS Team composition .......................................................... 15
Table 4 Registration data for the Q64 Natural Sciences degree .................. 23
Table 5 Qualification classification for first Q64 graduates by gender .......................... 24
<table>
<thead>
<tr>
<th>Table</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>Registration data for the Q77 Mathematics and Physics degree</td>
</tr>
<tr>
<td>7</td>
<td>Registration, completion and completion/pass data for men and women on Y033: Science, technology and maths access. Completion/pass data for 2015B is not yet available.</td>
</tr>
<tr>
<td>8</td>
<td>Registration, completion and completion/pass data for men and women on S104: Discovering science. Completion/pass data for 2015B is not yet available.</td>
</tr>
<tr>
<td>9</td>
<td>Registration, completion and pass data for level 2 physical sciences modules.</td>
</tr>
<tr>
<td>10</td>
<td>Registration, completion and pass data for all level 3 modules</td>
</tr>
<tr>
<td>11</td>
<td>Percentage of full-time (FT) PhDs registered in DPS by discipline. Benchmarking for DPS is against Physical Sciences.</td>
</tr>
<tr>
<td>12</td>
<td>Number of applications to full-time PhD studentships in DPS by discipline. Space instrumentation was previously included in PSS numbers.</td>
</tr>
<tr>
<td>13</td>
<td>Number of interviews for full-time PhD studentships in DPS by discipline. Space instrumentation was previously included in PSS numbers.</td>
</tr>
<tr>
<td>14</td>
<td>PhD place offers from 2014 and offers/acceptances from 2015.</td>
</tr>
<tr>
<td>15</td>
<td>Full-time PhD completion (within 4 years)</td>
</tr>
<tr>
<td>16</td>
<td>DPS staff data by gender and job role. SL is Senior Lecturer, L is Lecturer. (N.B. HR data reporting point is March so this does not include 2015 promotions.)</td>
</tr>
<tr>
<td>17</td>
<td>DPS turnover. Data for the reporting points March 2012/March 2013 are combined.</td>
</tr>
<tr>
<td>18</td>
<td>Promotions within DPS since 2010</td>
</tr>
<tr>
<td>19</td>
<td>Merit awards in DPS</td>
</tr>
<tr>
<td>20</td>
<td>Distribution of positions of responsibility within the Science Faculty, and posts held by DPS staff in 2015. CEPSAR is Centre for Earth, Planetary, Space and Astronomical Research. *Includes Director of Postgraduate Studies</td>
</tr>
<tr>
<td>21</td>
<td>Proportion of time reported by central academics for different activities: whole of DPS. Note: total DPS central academic days have a M/F split of ~ 7:2 (35% F)</td>
</tr>
<tr>
<td>22</td>
<td>Comparison between workload reported by central academics by disciplines (M+F added together)</td>
</tr>
<tr>
<td>23</td>
<td>Proportion of time proposed to be spent by central academics on different activities 2014/15 for all four disciplines with 2013/14 actuals for comparison. Caveat: SI only have two CA staff members (both male). None = no members of staff in this category</td>
</tr>
</tbody>
</table>
Glossary/List of acronyms

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Description</th>
</tr>
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<tbody>
<tr>
<td>AD</td>
<td>Associate Dean</td>
</tr>
<tr>
<td>AL</td>
<td>Associate Lecturer</td>
</tr>
<tr>
<td>APD</td>
<td>Associate Programme Director</td>
</tr>
<tr>
<td>AS</td>
<td>Athena SWAN</td>
</tr>
<tr>
<td>AWM</td>
<td>Academic Workload Management</td>
</tr>
<tr>
<td>CDSA</td>
<td>Career Development and Staff Appraisal</td>
</tr>
<tr>
<td>CEPSAR</td>
<td>Research Centre of Physical and Environmental Sciences</td>
</tr>
<tr>
<td>DA</td>
<td>Department Administrator</td>
</tr>
<tr>
<td>DMT</td>
<td>Departmental Management Team</td>
</tr>
<tr>
<td>DPS</td>
<td>Department of Physical Sciences</td>
</tr>
<tr>
<td>ECU</td>
<td>Equality Challenge Unit</td>
</tr>
<tr>
<td>E&amp;D</td>
<td>Equality and Diversity</td>
</tr>
<tr>
<td>eSTeE&amp;M</td>
<td>The OU Centre for STEM Pedagogy</td>
</tr>
<tr>
<td>FMT</td>
<td>Faculty Management Team</td>
</tr>
<tr>
<td>FTC</td>
<td>Fixed-Term Contract</td>
</tr>
<tr>
<td>GEM</td>
<td>Going the Extra Mile (awards)</td>
</tr>
<tr>
<td>GRADnet</td>
<td>Graduate network (from SEPnet)</td>
</tr>
<tr>
<td>HoD</td>
<td>Head of Department</td>
</tr>
<tr>
<td>HoDi</td>
<td>Head of Discipline</td>
</tr>
<tr>
<td>HoRD</td>
<td>Head of Research Discipline</td>
</tr>
<tr>
<td>JAS</td>
<td>Juno/Athena SWAN</td>
</tr>
<tr>
<td>KE</td>
<td>Knowledge Exchange</td>
</tr>
<tr>
<td>LMS</td>
<td>Learning Management System</td>
</tr>
<tr>
<td>MCT</td>
<td>Maths, Computing and Technology</td>
</tr>
<tr>
<td>PGT</td>
<td>Postgraduate Tutor</td>
</tr>
<tr>
<td>P&amp;A</td>
<td>Physics and Astronomy</td>
</tr>
<tr>
<td>PDRA</td>
<td>Post-Doctoral Research Assistant/Associate</td>
</tr>
<tr>
<td>PS</td>
<td>Project Secretary</td>
</tr>
<tr>
<td>PSS</td>
<td>Planetary and Space Sciences</td>
</tr>
<tr>
<td>PSSRI</td>
<td>Planetary and Space Sciences Research Institute</td>
</tr>
<tr>
<td>SEPnet</td>
<td>South East England Physics network</td>
</tr>
<tr>
<td>SFA</td>
<td>Senior Faculty Administrator</td>
</tr>
<tr>
<td>SGEG</td>
<td>STEM Gender Equality Group</td>
</tr>
<tr>
<td>SRA</td>
<td>Strategic Research Area</td>
</tr>
<tr>
<td>SREC</td>
<td>Science Research and Enterprise Committee</td>
</tr>
<tr>
<td>SREMG</td>
<td>Science Research and Enterprise Management Group</td>
</tr>
<tr>
<td>SST</td>
<td>Student Support Team</td>
</tr>
<tr>
<td>ST</td>
<td>Staff Tutor</td>
</tr>
<tr>
<td>STEM</td>
<td>Science, Technology, Engineering and Maths</td>
</tr>
<tr>
<td>OU</td>
<td>Open University</td>
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Throughout our submission we have integrated reporting on our Practitioner (Pxx) actions and planning for our Champion (Cxx) actions.

1. Introduction to The Open University
The UK’s Open University (OU) is a world leader in modern distance learning, pioneering methods to enable people to achieve their career and life goals at times and places to suit them. It is the UK’s largest university with over 250,000 students (most are studying part-time, taught by distance learning methods). Founded in 1969, it has a unique role in international higher education provision through its pioneering of global distance education. The OU’s mission is the be open to people, places, methods and ideas, and the ‘open’ concept reflects a deep-routed commitment to promote equality of opportunity for all, with most of our undergraduate qualifications and modules having no entry requirements. The conduct of internationally excellent research is central to the OU mission and it is particularly strong in science and technology. In 2013/2014 the OU’s research investment from externally funded sources was sponsored by bodies such as Research Councils, charitable trusts, government, commercial organisations, and the EU.

The Science Faculty comprises three departments: the Department of Environment, Earth and Ecosystems, the Department of Life, Health and Chemical Sciences, and the Department of Physical Sciences (DPS). DPS, with over 150 staff and postgraduate students, is the largest of the departments in the Faculty.

Research and teaching are driven from departmental level, but faculty-wide initiatives are also important. Examples of these include “eSTEeM” – a research centre bringing together academics in Science, Technology, Engineering and Mathematics (STEM) to promote innovation, scholarship and enterprise in open and distance learning – and the “Open-Science Laboratory” – an online laboratory which brings interactive practical science to students anywhere and anytime the internet is available. Until 2015, research activities relating to DPS science were under the umbrella of CEPSAR – the research centre for physical and environmental sciences. Changes to the research infrastructure are outlined in Section 2.2.

In 2015/16, the Faculty of Science will merge with the Faculty of Maths, Computing and Technology (MCT). The Department of Mathematics and Statistics, within MCT, has an Athena SWAN Bronze award, and the Chair of the University’s Athena SWAN Self-Assessment Team and the STEM Gender Equality Group (SGEG, formerly the Athena SWAN self-assessment team) resides within MCT and is involved in management discussions about the new faculty structure. In view of this level of existing activity in the two faculties, it is anticipated that the merger should strengthen activity in this larger unit. Two further departments in Science, and two in MCT are working towards Athena SWAN bronze. The current Dean of Science and the interim Executive Dean of the new faculty are both women. In Science, JAS activities sit within the Equality and Diversity portfolio of the Associate Dean for Student Support, Regions and Nations and
within the portfolio of the Associate Dean for Research, who also sits on the STEM-GEG. DPS and Mathematics and Statistics have worked closely on gender equality issues both before and since our Practitioner submission, so we see this merger as a way of developing consistent approaches for the benefit of all departments. We are confident that gender equality and continuity of activities towards JAS will be embedded within the new faculty structure.

2. Introduction to the Department
Since our Practitioner submission, DPS has been through several periods of structural change, the latest implemented in August 2015 as a result of a review of the management of the department by the new Head of Department (HoD). The new and previous HoDs were both women.

Figure 1 shows the positions of responsibility within DPS before July 2015; although there was some flux, this represents the structure for the majority of the period since our Practitioner submission. The department consisted of four disciplines for most of this time, although Space Instrumentation did not exist as a discipline when we were awarded Practitioner status, but was created soon after. HoDis (Heads of Discipline) line managed academic staff within those disciplines. Both before and after the 2015 reconfiguration, most PDRAs have been line managed by PIs.

Teaching was, and continues to be, managed on a module-by-module basis, with the Physical Sciences curriculum overseen by the Associate Programme Director (APD). Undergraduate and taught postgraduate students are advised and supported via the Science Student Support Team (SST), based at the OU’s Manchester Regional Office. The Physical Sciences Student Support Team lead represents the Physical Sciences within the Science SST and is a member of regional academic staff. This OU structure is explained further in Section 2.1.

Departmental administration is managed by the Departmental Administrator (DA).
Figure 2 represents the current positions of responsibility within DPS since August 2015. The abolition of disciplines as a formal structure in the department was intended to break down barriers between groups of staff to achieve a more inclusive community; heads of these groups still function as strategic leads (Heads of Research Disciplines (HoRDs)), but not line managers. Line management of all staff is shared between the HoD and two deputy HoDs (dHoDs), with one HoD having E&D embedded in their portfolio. Overall strategic research direction is provided by a research lead, whilst teaching continues to be overseen by the APD, a role that is currently occupied by one of the dHoDs.

The structural changes made in 2015 were a direct result of a new HoD taking up post in April 2015, consultation with staff via one-to-one meetings, weekly open forums, and a staff survey (see Principle 1.1.2) to establish how staff support could be improved. However, for most of the period this document covers, the pre-July 2015 structure was in place and it is this structure that we refer to as default in the rest of this submission, as it covers the larger part of the time-period analysed. Also, the annual data reporting point for staff data is March of each year.

JAS is strongly represented on the Department Management Team (DMT) with three members of the DMT also currently sitting on the JAS self-assessment team.

2.1 Members of DPS
The proportion of women employed by DPS across all staffing categories is 33%; of those on academic/research contracts, 32% are women.

Academic staff are divided into two categories, central and regional. These two categories have different contract terms and conditions, offering different amounts of time for research, teaching and administration. Central academic staff are based at the campus in Milton Keynes and have standard academic terms and conditions.

Regional academics, also known as Staff Tutors (STs), are based in 12 Regional and National centres throughout the UK. The regional academics’ main contribution is to
teaching, although some also do research, in addition to holding line-management responsibilities for part-time Associate Lecturers (ALs). DPS regional academics are appointed at faculty level and they manage a wide range of AL staff, including the regional, part-time ALs (28% of whom are women) who are directly associated with physical science modules.

**DPS JAS team recognised the importance of regional academics in ensuring equality in our curriculum and a regional academic representative was invited to become part of the JAS team [Practitioner action P38]**

ALs support students throughout the year, sometimes on a local basis. ALs are employed within the Science Student Support Team, not the Department. As such, they are outside the scope of the DPS analysis or support network. In addition, many ALs also have substantive roles within other organisations, the issues relating to their career progression are complex and beyond the scope of what is possible to investigate here. The complexities of AL career development have previously been addressed in a research project (Donovan et al., 2005), which focussed specifically on female ALs in STEM. The findings of that work showed that, thanks to the OU’s flexible employment patterns, AL employment restores women’s confidence in their abilities and actively develops women’s careers in HE.

In light of this substantial work already undertaken, the exclusion of ALs from our analysis is in line with the University’s decision to exclude them from Athena SWAN analyses. This decision has been approved by the Equality Challenge Unit’s (ECU) Athena SWAN team. However, it is acknowledged that several academic members of DPS staff, including the current HoD, have career paths that have included employment on AL contracts as career development and/or alongside caring commitments. In addition, DPS acknowledge the importance of ALs to successfully deliver our curriculum, and several of our Champion Actions involve ALs or are of benefit to ALs. The JAS team has presented their work at a Physical Sciences AL teaching day to raise their awareness of our activities.

At the time of our Practitioner submission, DPS research was co-ordinated through CEPSAR (Research Centre for Physical and Environmental Sciences), a centre that included members from within and beyond DPS. Since then, CEPSAR has been dissolved and faculty research has restructured. The line management of many academic-support staff (e.g. project officers) has therefore moved into DPS, appearing to inflate our overall staff numbers compared to our Practitioner submission.

**DPS recognised the contributions of academic-related staff to department activity and our responsibilities towards their career development, and, in response to informal feedback from that staff group, an academic-related staff member was invited to become part of the JAS team in 2014 [Practitioner action P38].**

**Figure 3** shows all members of DPS (staff and PhD students). The PhD students are the largest cohort with research staff taking up the next biggest proportion. Regional academics form the smallest cohort. The low numbers of staff in each job role make
some of our analysis lack statistical significance, but we are careful to ensure their views are always considered.

*Figure 3 Members of DPS by role (March 2015)*

*Figure 4 shows that men dominate in all job roles except regional academics and support staff, although numbers in those groups are low. Below, we outline a current research project into investigating why women are preferentially attracted to the regional academic role. In all other job roles, women represent between 26% and 32% of the staff (average 32% across the remaining academic/research roles). It should be noted, however, that there are members of the department for which gender identity is not straightforward, and we are careful to be sensitive to this. For the purposes of data reporting, these staff choose which gender they are assigned to (via confidential Equal Opportunities forms completed on arrival) but are free to change this via the OU’s staff self-service system.*

*Figure 4 also shows that, for both sexes, the PhD student cohort is the largest group in DPS, a group that has seen the biggest increase in numbers since 2013. This is a positive observation, reflecting our improved external web presence, acknowledgement of our vibrant research profile and an influx of external funds through successful grant bids.*

Compared to the data in our 2013 Practitioner submission (*Table 1*), the proportion of women in DPS has remained constant (33% *cf.* 34% in 2013) and women still dominate in the regional academic and support staff roles (the proportion of women in only academic/research roles is 34%). We are therefore pleased that DPS has remained
above benchmarking values for academic/research staff in Physics (17.5%, HESA, 2012-13), our nearest HESA cost-centre comparison. We are also pleased because this is consistent with the proportion of women academics/researchers in STEM in the wider OU (35%).

In light of the dominance of women in the regional academic role (although numbers are low), and feedback on our Juno and Athena SWAN submissions, DPS (via one of the JAS chairs, and one other member of DPS staff) are collaborating with the Maths and Statistics Department on an eSTEeM-funded project to survey then interview regional academics about their career choices and progression. Results will be available in late 2015 and it is expected that this work will be presented at the University’s annual scholarship conference.

Results of the project on regional academic careers will be shared DPS-wide via the intranet and newsletter, and to the faculty via discussions with the AD and the Science Staff Tutor Group [Champion action C31].

Table 1 shows there have been some fluctuations within other staff groups. For example, the proportion of women in central academic roles has decreased, however this reflects turnover of only 4 staff (2 men, 2 women) all of which were retirements. We are pleased to report that the proportion of women in research roles has increased since 2013 (from 23% in 2013 to 31% in 2015). Although this reflects, in part, a decrease in the number of men in these roles, it also presents an increase in the number of women recruited. These trends will be discussed further in Principle 1.2.1.

Table 1 Comparison between March 2013 (Juno Practitioner) and March 2015 data for job roles across DPS. Note that academic-related staff were not part of the DPS staff in 2013.

<table>
<thead>
<tr>
<th>Job roles</th>
<th>Women % total</th>
<th>Women % total</th>
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<tbody>
<tr>
<td>Academic Related</td>
<td>27</td>
<td>27</td>
</tr>
<tr>
<td>Central academics</td>
<td>29</td>
<td>26</td>
</tr>
<tr>
<td>Regional academics</td>
<td>84</td>
<td>67</td>
</tr>
<tr>
<td>Research staff</td>
<td>23</td>
<td>31</td>
</tr>
<tr>
<td>Support staff</td>
<td>62</td>
<td>62</td>
</tr>
<tr>
<td>PhD students</td>
<td>32</td>
<td>32</td>
</tr>
<tr>
<td>Total</td>
<td>34</td>
<td>33</td>
</tr>
</tbody>
</table>

As requested in our Practitioner feedback, we also investigated the composition of our academic/research staff by nationality. 80% of staff declared as British, with the remaining 20% from EU countries, with Germany being the most declared nationality. These data have been consistent for the last two years despite staff turnover. There is no correlation between nationality and gender, and roughly 20% of men and 20% of women are non-British. However, men in the Department originate from a greater range of countries than women, suggesting greater mobility.

More analysis of academic/research staff is presented under Principle 1.2.1.
DPS is located in three buildings on campus: “Robert Hooke”, “Perry” and “K-Block”. K-Block includes those researchers working on planetary surfaces and atmospheres; these are people involved with activities that use computer-based resources (modelling and remote sensing) and do not necessarily require laboratories. The Perry Building comprises a number of experimental laboratories dedicated to cold atom research, astrochemistry, plasma and molecular physics, hypervelocity impacts and space environmental simulations. Most of the staff who work in these facilities also have desks in the Robert Hooke Building (Figure 5), along with all the other members of DPS. Regional academics also have office areas allocated within the Robert Hooke Building to use when they come to the campus. The Robert Hooke Building includes those laboratories dedicated to planetary sciences, space instrumentation and electronic imaging. A large part of the DPS estate is open-plan (for all categories of staff), but breakout spaces and seminar rooms are amply provided and the HoD has an office to maintain confidentiality, where required. We attempt to constrain all major social interactions to the Robert Hooke Building itself.

More details about the culture of the department are given in Principle 4.1.

### 2.2 Organisation of DPS research

As outlined above, the organisation of research within the Faculty has been subject to change since the Practitioner submission. Within DPS, a Research Lead has been appointed to implement the Faculty’s research strategy within the department by overseeing the allocation of resources, representing the department at faculty and university level and externally, and providing leadership for research. Heads of research disciplines (formerly HoDis, now HoRDs) continue to provide focused research leadership and it is not expected that this structure will change during the forthcoming faculty merger.
Since the role was created in April 2015, the DPS Research Lead sits on the DMT and on the faculty-level Science Research and Enterprise Committee (SREC) and associated Science Research and Enterprise Management Group (SREMG).

Within (and sometimes cutting across) the four formal research disciplines in DPS are a number of informal, although in some cases long-running, research groups of various sizes and compositions. These groupings are largely self-organised and focus on exchanging ideas and results, planning experiments, grant proposals, conference attendance etc.

As part of our Practitioner submission we committed to investigate why the leads of informal research groups did not have formal recognition [Practitioner action P47].

Discussions within the department indicated that, within these groups, all staff (academics, PDRAs, project officers and PhD students) have a voice. In light of the obvious success of these groups, the department is reluctant to try and formalise or harmonise their operation in any way, particularly since these informal groupings have enabled research to be sustained during a period of significant change and will probably play a similar function during the faculty merger.

The University has recently announced a 5-year commitment to funding a ‘Strategic Research Area’ (SRA) in Space, with a focus on electronic imaging, Space-based instrumentation, and data acquired from Space. This includes investment in new academic and support posts to be advertised in 2015/16. The SRA includes research areas beyond DPS, but it is hoped that DPS will benefit from the posts on offer with new staff and equipment being sought. The SRA is led at faculty-level by the Associate Dean for Enterprise and External Affairs (male), who is also a member of DPS.

More information regarding future actions for staff recruitment is given in Principle 2.2.1, and more about faculty-level positions of responsibility is in Principle 4.1.1.

The line management of research and support staff varies, depending on circumstances. In general, fixed-term contract (FTC) research staff are line managed by the member of staff who is the PI of the grant or contract that funds them. Academic-related staff (project officers) are line managed by the HoD, one of the HoRDs, or by the PI of the grant or contract that funds them. Technical support staff are line managed by a faculty-based senior laboratory manager or research team lead academic. Academic-related staff and technical support staff were previously managed via CEPSAR.

2.3 Organisation of DPS teaching

DPS teaching focuses on the Physical Sciences curriculum, but staff also contribute to other science curricula, including the broad-based Natural Sciences curriculum.

Teaching is overseen by a faculty-level Science Programme Committee, chaired by the Associate Dean for Curriculum and Qualifications, and includes Associate Programme Directors (APDs) for each subject pathway (e.g. physical sciences, environmental
Department of Physical Sciences Juno Champion submission. Nov 2015.

sciences). The Physical Sciences APD is a member of DPS academic staff and also sits on the DMT. Individual members of DPS staff are also Module Team Chairs; these staff organise Module Teams (teams of academic staff) to create and deliver the academic content of our modules. Table 2 shows the gender split of Module Team Chairs for modules in the physical sciences curriculum, however it should be noted that there are DPS staff members who teach and chair modules on other subject pathways (for example, one women in DPS is chair of an interdisciplinary module that is not included in the physical sciences pathway).

<table>
<thead>
<tr>
<th>Table 2 Module Team Chairs within the physical sciences curriculum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Men</td>
</tr>
<tr>
<td>------</td>
</tr>
<tr>
<td>Level 1 Interdisciplinary (2 modules)</td>
</tr>
<tr>
<td>Level 2-3 physics (9 modules)</td>
</tr>
</tbody>
</table>

The OU has an open entry policy, so students are not required to have any previous qualifications to gain a place on our undergraduate (UG) degrees. This means that, although students are advised of the level and academic requirements of our modules, anyone that applies will be accepted. This is one of the core guiding principles of OU study and is embedded in our Mission. We therefore do not include any data on acceptances/rejections.

Because of the interdisciplinary nature of OU qualifications, data on taught UG and taught postgraduate (PG) qualifications/modules is collected at university-level, but scrutinised at department and faculty-level. External drivers have dictated that our curriculum has been in a state of flux since 2012, with further changes planned for the 2015/16 academic year. This has made analysis of data difficult at anything other than module level.

Until October 2012, most UG students constructed their degree profiles by combining individual modules of their choosing from across all subjects until they had achieved 360 points for an undergraduate honours degree (or 180 points at Masters level). Most students claimed BA (Open) or a more specialist, possibly named degree (e.g. BSc Physical Sciences or BSc Natural Sciences (Physics or Astronomy and Planetary Science pathways). Although some students formally signalled their intention to study for a particular degree during their years of study, many did not and all were at liberty to change their degree goal at any point. This system made monitoring progression towards subject-based named degrees impossible.

Since October 2012 UG students must register for a qualification on entry to the University, although within the constraints of their loan agreement they can change, or opt for the Open degree. This has also resulted in necessary changes to the curriculum structure and the qualifications offered with some modules in ‘teach out’ as replacements have been introduced. As most of our students are studying part-time, we cannot present robust data for qualification completion yet. For this reason, we continue to present data by module.

More details on our curriculum are given in Principle 1.2.1.
2.4 The JAS SAT Team

Membership of the Juno Athena SWAN (JAS) self-assessment team (SAT) was constructed to ensure all staff categories within the DPS academic and research staff base were represented, balancing gender, age, discipline, expertise and experience.

In light of feedback from Juno and Athena SWAN, DPS staff and in response to our Practitioner actions, this was extended to include regional academics, academic-related staff and PhD students (specifically Hooke Soc, the DPS social society) [Practitioner action P38].

Table 3 shows the JAS team members and the experience they bring. Because of the predominance of women in the ST role and the inclusion of Hooke Soc, the gender balance on the team has shifted towards women since Practitioner submission as the team has become more inclusive. Also, two members of the team have recently gained promotion, so the seniority of the team appears inflated.

More information about promotions is given in Principle 3.2.1.

The composition of the team will be reviewed by the JAS co-Chairs and HoD and rationalised in order to maintain staff balance representative of the department. [Champion action C03].

The team is led by Victoria Pearson and Matt Balme.

<table>
<thead>
<tr>
<th>Team member</th>
<th>Job role</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dr Sally Jordan</td>
<td>HoD and member of Physics discipline</td>
</tr>
<tr>
<td>Dr Stephen Lewis</td>
<td>dHoD, Senior Lecturer, PSS</td>
</tr>
<tr>
<td>Dr Carole Haswell</td>
<td>Senior Lecturer, Astronomy</td>
</tr>
<tr>
<td>Prof Ian Wright</td>
<td>Professor, Space Instrumentation</td>
</tr>
<tr>
<td>Dr Samuel Eden</td>
<td>Senior Research Fellow, Physics</td>
</tr>
<tr>
<td>Dr Silvia Bergamini</td>
<td>HoDi, Senior Lecturer, Physics</td>
</tr>
<tr>
<td>Ms Liz Whitelegg</td>
<td>Honorary Associate (retired, formally Senior Lecturer)</td>
</tr>
<tr>
<td>Mr Pete Landsberg</td>
<td>Research Technician, Laboratory Support</td>
</tr>
<tr>
<td>Dr Diane Johnson</td>
<td>PDRA/Project Officer, PSS (recently resigned from team due to workload)</td>
</tr>
<tr>
<td>Miss Louise Hobbs</td>
<td>Department Administrator</td>
</tr>
<tr>
<td>Ms Laura Alexander</td>
<td>Regional academic</td>
</tr>
<tr>
<td>Laura Brooker</td>
<td>PhD student, PSS</td>
</tr>
<tr>
<td>Joe Rushton</td>
<td>PhD student, Space instrumentation</td>
</tr>
<tr>
<td>Rhiann Chapman</td>
<td>PhD student, PSS</td>
</tr>
<tr>
<td>Miss Georgina Vizard</td>
<td>Project Secretary</td>
</tr>
</tbody>
</table>
The JAS team meet every two months to discuss activity against JAS action plans, data collected. Actions were allocated to individuals following our Juno Practitioner submission, fitted to their experience and job role.

Members of the JAS SAT have an agreed workload allocation of five days each (the co-chairs have 10 days each). Student representatives have agreement from supervisors.

In the 2015/16 academic year, the JAS team will evolve into the DPS Equality and Diversity team which will meet three times a year, fulfilling a similar function to the current team but with a broader remit and responsibility for actions.

**A smaller JAS working group (the JAS co-chairs, HoD, Department Administrator and other staff working on specific actions at any time) will continue to meet on a monthly basis to discuss progress against the action plan, reporting to the E&D team [Champion Actions C02 and C03].**

The team has been allocated a non-staff budget to enable members to attend off-campus meetings, purchase consumables or refreshments for meetings. The HoD has consistently sat on the JAS team, attending all meetings, and a dHoD (and previously a HoDi) also sits on the JAS team. One JAS co-Chair is now a member of the DPS Extended Leadership Team.

### 2.5 Challenges faced

Although we are proud of our progress against our Practitioner action plan, and pleased to demonstrate how we are championing gender diversity, we are also realistic about what has been achievable under current constraints.

As outlined, the university, faculty and department are undergoing major changes to management structures, curricula and workforce, which impact on the day-to-day tasks that staff undertake. Throughout, the JAS team and HoD have worked hard to ensure JAS actions are furthered despite this, and have spoken out at meetings and via consultations to ensure equality issues, and specifically gender issues, are considered.

The following summarises the challenges (and risks) to embedding gender equality that we have experienced:

- Finding a way to maintain progress and get wider staff involvement when the university and department structures are rapidly changing – sapping time from all staff.
- Managing a conflict between university structures and policies and a desire to do something different at department level.
- Extracting data and information from university and/or faculty systems
- Finding a way to make the case for the importance of gender inclusivity to some senior staff members
• Finding a way to make CDSA appropriate for all staff members and to encourage staff to embrace the process.
3. **Progress since Practitioner against Principles**

We outline our progress since Practitioner against the Juno Principles, using the checklist as an overall structure for analysis and discussion. This ensures a complete and honest overview of the department that would not be possible if we were to merely report on our actions. In the right hand column is our assessment of how well we believe we demonstrate each principle: A = embedded, B = adopted, C = developing, etc.

<table>
<thead>
<tr>
<th>Principle 1</th>
<th>A robust organisational framework to deliver equality of opportunity and reward</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1.1 Establish organisational framework</strong></td>
<td>Previously we did not have any actions within this sub-principle. Here we report the evolution of Juno activities, and how we are taking steps to embed them into the department activities.</td>
</tr>
<tr>
<td><strong>1.1.1 Evidence of senior management commitment.</strong></td>
<td>There is very strong support for Juno/Athena SWAN (JAS) activities from the HoDs, previously Professor Monica Grady and, since April 2015, Dr Sally Jordan. Both are involved in promoting women in STEM, with Professor Grady regularly quoted in the media on the subject, and Dr Jordan actively pursuing research in this area. JAS submissions and action plans have been agreed by the Department Management Team (DMT) and the Faculty Management Team (FMT). As outlined in Section 2, the HoD and one dHoD (who has equality and diversity in his portfolio) both sit on the JAS team, and one JAS co-chair is now a member of the Department’s Extended Leadership Team, championing equality at the highest levels in the department.</td>
</tr>
<tr>
<td><strong>The HoD (or nominated deputy) will continue to attend all Equality and Diversity/JAS working group meetings [Champion action C01].</strong></td>
<td></td>
</tr>
<tr>
<td><strong>1.1.2 Effective consultation, communication, monitoring, evaluation and reporting mechanisms.</strong></td>
<td>There is strong support within the Faculty, with JAS activities written into the Faculty’s business plan. The Faculty provides financial support to the University’s Women in STEM networking meetings, to which all DPS women staff are invited.</td>
</tr>
<tr>
<td><strong>1. Upwards/outwards communication and consultation</strong></td>
<td>Section 2 outlines the reporting and consultation lines upwards from the JAS team to the DMT.</td>
</tr>
</tbody>
</table>
From October 2015, one of the JAS co-chairs will attend ELT monthly [Champion Action C04].

To date, the JAS team also make a formal report on progress against JAS action plans to the University’s STEM Gender Equality Group (SGEG) at quarterly meetings, and DPS have representation at every meeting of that group. There they meet with all departments involved in Athena SWAN (AS) activities to collaborate on activities such as data collection, lobbying the university etc. In addition, there are existing close relationships between all Juno/Athena SWAN self-assessment teams in order to share resources and achieve consistency of practice. JAS activities meet the University’s Equality Scheme (2012-16) by virtue of their inclusion in the Faculty’s Business Plan.

In 2015, the department hosted the IoP’s inaugural Juno Practitioners’ networking meeting.

In 2014 and 2015, the JAS team made nominations to the University’s Honorary Degrees Office to honour women in STEM. The 2014 nomination has been successful, and it is anticipated that the recipient will receive their honour at a degree ceremony in 2016.

2. Consultation and reporting to DPS members

All DPS staff have had the opportunity to input into JAS activities via their representative on the team, and at departmental meetings, where JAS has been a standing item on the agenda since 2013 (see below). JAS activities are also presented in the monthly DPS newsletter, which is disseminated to all staff and students.

In 2015, the JAS team launched a survey to all DPS staff and PhD students with support from the University’s Institute for Educational Technology (IET) surveys team. Although the response rate was 54%, which is lower than the University’s 2014 biennial survey response rate (70%), it is consistent with previous survey response rates, and responses to the annual, short, OU PULSE surveys. Currently, because of the changes manifesting across the university, staff are anecdotally reporting “survey fatigue“ and it is unfortunate that staff were asked to complete a number of other internal and external surveys at the same time as ours. In this context, though, the response rate is not considered disappointing. Further results of the survey will be interspersed through the remainder of the narrative.

We have worked hard to embed Juno Principles into the culture of the department with successes outlined throughout this document. However, there is still some work to do. Whilst 63% of staff/PhD students respondents to our 2015 staff survey (see Principle 1.1.2) value the work of the JAS team; 20% do not and 17% were not aware of the work. The majority of those unaware of activities were PhD students, which is surprising since they have representation on the JAS team. However, we have reviewed the way we communicate JAS activities, and, more importantly, broad equality issues and have launched a DPS Equality and Diversity website (external facing, Figure 6) and intranet page (internal facing, Figure 7).
Equality and Diversity

Welcome to the equality and diversity webpage for the Department of Physical Sciences. The Department is committed to ensuring that staff and students work within an environment that is inclusive and supportive for all.

The Department also seeks to maintain the highest standards in teaching, research and enterprise in accordance with the Open University’s mission of being:

"open to people, places, methods and ideas."

All staff and students in the Department therefore commit to:

- Treat others with dignity and respect
- Adopt a professional attitude at all times to create a positive working environment
- Listen to and support each other
- Respect the views of those who hold different opinions from our own, and where possible seek out such views before voicing our own opinions
- Endeavour to keep our promises which are both honest and realistic
- Respect each other’s time and personal space, maintaining confidentiality at appropriate times
- Constructively challenge behaviour that does not fit this framework

The Department is proud to be a recipient of the Athena SWAN Bronze Award in recognition of our commitment to addressing the under-representation of women in STEM, particularly Physics and subjects aligned to Physics.

Therefore we also adhere to the following principles:

- Diversity and Inclusion
- Gender
- Race
- Disability
- Religious and Spiritual Beliefs
- Sexual Orientation
- Age
- Gender Reassignment
- Parental Status
- Health and Well-Being

The DPS E&D intranet will be completed to include links to information about JAS/E&D activities/minutes, relevant University and DPS policies and procedures, external links [Champion action C05].
In the survey responses, there were no gender differences between those who did, and those who did not value the work of the JAS team. The free-text responses for this question, however, were enlightening and present the JAS team and the DPS DMT with some challenges. A common theme related to the narrow focus on gender issues instead of on improving general life in the department. Since many of the successes of the team relate to issues that affect all staff, e.g. changing recruitment practices (Principle 2.2.1) and improving Career Development and Staff Appraisal (CDSA) completion (Principle 3.3.1), we hope the new intranet/website will help communicate the benefits of JAS activities for DPS members.

83% of respondents in the survey stated they understood the reasons for considering issues of gender in all aspects of DPS life. The department is committed to fostering an environment which understands and supports diversity of all types (age, ethnicity as well as gender) and actively strives to eliminate inequalities. The evolution of the JAS team into the DPS E&D team will help with this.

In our 2013 Practitioner submission we presented results from the 2012 all-staff University survey, disaggregated by department. A further all-staff University survey was conducted in 2014. Neither survey reported result disaggregated by gender. Although in both instances, the average scores for DPS were below that of the University as a whole, there had been an improvement since 2012, particularly in areas relating to satisfaction with pay, opportunities for promotion, job security and work intensity. We have chosen not to use data from the annual PULSE surveys as these are much shorter and less instructive.

IET, via SGEG, have raised concerns about the over-use of surveys for staff consultation for Juno and Athena SWAN activities because of resources needed to build each survey, and the evident risk of survey fatigue, but are now able to provide results of future (2016) all-staff University surveys disaggregated by both department and gender.

The DMT and JAS team will receive and scrutinise the 2016 (and subsequent) all-staff survey results by gender and compare these with previous years to establish any long-term trends [Champion action C06]

Since the questions in the all-staff survey are generic, DPS (via JAS SAT and the Department Administrator) will continue to issue an annual DPS survey to monitor progress against Juno Principles/Athena SWAN Charter [Champion action C07].

It may, however, be appropriate to undertake consultation with members of the Department by other means.

3. Departmental communication

The new HoD reviewed communication in the department and, following consultation, has made changes to ensure inclusivity. Previous department meetings had been only for academic staff, with other job roles included via representatives, and the whole department only met annually. From July 2015, the department meetings are open to all staff and PhD students. In that environment, formal reporting from different groups, e.g. JAS team, is less
appropriate and items for open dialogue are instead preferred. For example, there was open discussion about the results of the DPS staff survey at the first DPS meeting of the new structure. Nevertheless, the monthly departmental newsletters and weekly HoD updates continue to contain E&D items.

1.1.3 Clear accountability for implementation and resources allocated (time and money)

As indicated in Section 1.4, membership of the JAS team carries a workload time allocation which is fed into the University’s online Academic Workload Management (AWM) system. Secretarial and admin support have also been allocated to this work with JAS workload being embedded into the person specification for a new project secretary to ensure continued support since the 2013 Practitioner submission, and for all new appointments to this role. The appointment of temporary assistance (a Nuffield student) to support some of the discrete research, including annual data monitoring, has been supported by the HoD.

As indicated in Section 1.4, to support JAS team members attending national gender-related meetings and to provide refreshments at events (e.g. DPS hosted the inaugural Juno Practitioner networking meeting), the JAS team were also allocated a modest non-staff budget. We also were able to provide a bursary for one undergraduate student to attend the Women in Physics conference at Oxford University in 2014. As our students are distance learners, while we encourage their attendance at extra-curricula events, we do not actively support them to attend. However, we funded the student’s travel costs (fees and accommodation were provided), and they wrote a report on the conference for the DPS newsletter.

JAS activities will continue to be supported financially by the Department [Champion action C08].

1.2 Monitoring and evidence base

1.2.1 Monitor, over time, qualitative and quantitative data by gender for staff and students.

1. Student data

(i) Undergraduate degrees

There is currently no undergraduate Physics degree; however there are Physics, and Astronomy and Planetary Science ‘pathways’ through the undergraduate Natural Sciences curriculum (Q64). Students on transitional funding are registered on the same programme, but on a different qualification (B64), which ends in 2017. From the 2015/16 academic year, pathway names will be added, leading to degrees with the titles Natural Sciences (Physics)

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1 The University’s guidance for students on transitional funding is available here: [http://www.open.ac.uk/students/charter/sites/www.open.ac.uk.students.charter/files/files/ecms/web-content/fee-rules-2014.pdf](http://www.open.ac.uk/students/charter/sites/www.open.ac.uk.students.charter/files/files/ecms/web-content/fee-rules-2014.pdf) It should be noted that the OU support students across all four home nations, each with different funding arrangements, and so funding is too complex to describe here.
and Natural Sciences (Astronomy and Planetary Science).

In our Practitioner submission, we committed to ensuring that registration and award data for the physics and astronomy pathway of the new qualification would be produced by gender [Practitioner action P01], for monitoring by the JAS, the Qualification Team and the Science Programme Committee and that we would compare this with historic data.

Table 4 gives registration data by gender for Q64 for students who were still registered on a module(s) at the 25% fee liability date (Reg-25\(^2\)), and had chosen to link the module they were studying at the time of data collection to Q64.

<table>
<thead>
<tr>
<th>Gender</th>
<th>Female</th>
<th>Male</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012/13</td>
<td>35.3</td>
<td>64.7</td>
</tr>
<tr>
<td>2013/14</td>
<td>39.7</td>
<td>60.3</td>
</tr>
<tr>
<td>2014/15</td>
<td>42.8</td>
<td>57.2</td>
</tr>
<tr>
<td>Total</td>
<td>38.9</td>
<td>61.1</td>
</tr>
</tbody>
</table>

As can be seen, the percentage of female students appears to be increasing over the period, while the overall number of students is fluctuating. However, these data can be skewed by students transferring between qualifications after the introduction of the new fee regime and associated new qualifications. For example, some students might have initially registered for Q64, and then transferred to Q77 after their first modules. Overall though, the gender balance appears to be improving. As discussed above, it is not possible to differentiate between students on the Physics/Astronomy and Planetary Science pathways and those on other Natural Sciences pathways for the period 2012/13 to 2014/15.

Table 5 gives a breakdown of degree classification by gender for Q64. The numbers for 2014/15 are too low to allow any reliable conclusions to be drawn, though. Q64 has only been offered since 2012, and due to the change in funding regime, and the fact that most of our students study part time, we would not expect significant numbers to begin graduating from Q64 for another year or two.

\(^2\) Reg-25 (from the 2013/14 academic year) represents day 13 of module presentation where students can withdraw without a financial penalty. Fee penalty in Scotland applies at Day 1, but Reg-25 (Day 13) numbers are recorded for all students regardless of home nation. Historic registrations record registrations on Day 1.
Table 5 Qualification classification for first Q64 graduates by gender

<table>
<thead>
<tr>
<th>Gender</th>
<th>Qualification Classification</th>
<th>Male</th>
<th>2.1</th>
<th>2.2</th>
<th>3</th>
<th>2.2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>2014/15</td>
<td>12.5</td>
<td>25</td>
<td>25</td>
<td></td>
<td>12.5</td>
<td>25</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>12.5</td>
<td>25</td>
<td>25</td>
<td></td>
<td>12.5</td>
<td>25</td>
</tr>
</tbody>
</table>

Table 6 gives registration data by gender for Q77 (Mathematics and Physics) for those students who were still registered on a module(s) at the 25% fee liability date, and who had chosen to link the module they were studying at the time of data collection to Q77. As can be seen, the percentage of female students appears to be increasing over the period, as does the total number of students. Note that Q77 was only visible to students from 2013/14, and, like Q64, student numbers may be subject to significant fluctuations.

The lower percentage of female students for Q77 compared to Q64 for the years up to 2014/15 reflects the fact that the Q64 figures include students on the other Natural Sciences pathways, which traditionally have a much higher proportion of female students (e.g. Health Sciences). However, the proportion of women on Q77 is more consistent with UK Benchmarking data for Physics courses (20.3% women, HESA 2012/13) than those of Maths courses (39.9%, HESA 2012/13).

Table 6 Registration data for the Q77 Mathematics and Physics degree

<table>
<thead>
<tr>
<th>Gender</th>
<th>Qualification Classification</th>
<th>Female</th>
<th>2.1</th>
<th>2.2</th>
<th>3</th>
<th>Male</th>
<th>2.2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>2013/14</td>
<td>17.0</td>
<td>83.0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>2014/15</td>
<td>20.2</td>
<td>79.9</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>18.7</td>
<td>81.3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Classification data is not yet available for Q77 as no students have completed the qualification yet. Unlike staff data (see below), we have been unable to initiate an automatic annual reporting system specifically for JAS and data collation has been sporadic, depending on conflation periods and the type of data requested.

We will establish an automated annual data reporting cycle for DPS modules/qualifications by which the Department Administrator requests the data each year for the JAS team to analyse [Champion action C09].

For the reasons explained in Section 1.3, we also present data at the module level to provide a richer picture of our students. Modules are presented once or more per year, with each presentation coded according to month of presentation start, (A=Jan, B=Feb etc.).

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3 UK Benchmarking data from HESA Student Record 2012/13 provided via Equality Challenge Unit (Athena SWAN), http://www.ecu.ac.uk/equality-charters/athena-swan/athena-swan-resources/data/
(ii) Access and introductory level 1 modules

We present data for registration (or Reg-25) completion and pass. Percentages for completion are as a percentage of those that started (or at Reg-25 where available); percentages for pass are calculated as a percentage of those that completed.

There is only one access module for STEM (Y033: Science, technology and maths access), and management of this is handled by the University’s Centre for Inclusion and Collaborative Partnerships (CICP), not the faculty, although academic support is provided by the Science and MCT faculties. This module runs twice a year (J – October, and B – February) and data for this module since its first presentation in 2013J is presented on Table 7.

<table>
<thead>
<tr>
<th>Module</th>
<th>Presentation</th>
<th>Gender</th>
<th>% women (of total numbers at reg-25)</th>
<th>Percentage completed as % of registered at fee date</th>
<th>Percentage passed as % of those completed</th>
<th>Proportion of women passed (% of total students that passed)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Y033</td>
<td>2013J</td>
<td>Female</td>
<td>33%</td>
<td>68%</td>
<td>98%</td>
<td>32%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Male</td>
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<td>71%</td>
<td>96%</td>
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<tr>
<td></td>
<td>2014B</td>
<td>Female</td>
<td>27%</td>
<td>72%</td>
<td>98%</td>
<td>30%</td>
</tr>
<tr>
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<td></td>
<td>Male</td>
<td></td>
<td>64%</td>
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<tr>
<td></td>
<td>2014J</td>
<td>Female</td>
<td>39%</td>
<td>70%</td>
<td>97%</td>
<td>42%</td>
</tr>
<tr>
<td></td>
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<td></td>
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<td>96%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2015B</td>
<td>Female</td>
<td>37%</td>
<td>-</td>
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</tr>
<tr>
<td></td>
<td></td>
<td>Male</td>
<td></td>
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</tr>
</tbody>
</table>

Based on only three presentations, the proportion of women on the access module ranges from 27% to 37%. This is lower than UK benchmarking for physics access courses (47% for part-time women students, HESA 2012/13) but this module covers all STEM including engineering where women on access modules are <10% of the cohort. There is no obvious difference between men and women for completion or pass/completion, indeed it could be suggested that women have been more successful than men, particularly in 2014J. However, prior to 2014J, Y033 was not available to students in Scotland/Wales/ N. Ireland; the inclusion of this group of students may reflect national differences in student gender.

We will continue to monitor gender on our STEM access module (Y033) annually, as part of our continued monitoring of student data [Champion action C10].

S104 (Discovering science) is the level 1 ‘gateway’ module and is a cross-disciplinary module covering all science disciplines. As such, this is not ‘owned’ by DPS, although DPS academic staff do teach (and indeed lead) this module. This module also runs twice a year and data is shown in Table 8.
Table 8 Registration, completion and completion/pass data for men and women on S104: Discovering science. Completion/pass data for 2015B are not yet available.

<table>
<thead>
<tr>
<th>Module</th>
<th>Presentation</th>
<th>Gender</th>
<th>% women (of total numbers at reg-25)</th>
<th>Percentage completed as % of registered at 25% fee date</th>
<th>Percentage passed as % completed</th>
<th>% women (of total students passed)</th>
</tr>
</thead>
<tbody>
<tr>
<td>S104</td>
<td>2013B</td>
<td>Female</td>
<td>40%</td>
<td>52%</td>
<td>84%</td>
<td>40%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Male</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>2013J</td>
<td>Female</td>
<td>41%</td>
<td>59%</td>
<td>83%</td>
<td>40%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Male</td>
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<td></td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>2014B</td>
<td>Female</td>
<td>39%</td>
<td>49%</td>
<td>91%</td>
<td>38%</td>
</tr>
<tr>
<td></td>
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<td>Male</td>
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<tr>
<td></td>
<td>2014J</td>
<td>Female</td>
<td>40%</td>
<td>62%</td>
<td>79%</td>
<td>37%</td>
</tr>
<tr>
<td></td>
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<td>Male</td>
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<tr>
<td></td>
<td>2015B</td>
<td>Female</td>
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<td>-</td>
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</tr>
<tr>
<td></td>
<td></td>
<td>Male</td>
<td></td>
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</tr>
</tbody>
</table>

This module has seen major structural and content changes since our Practitioner submission, which makes comparisons with earlier years difficult. Since 2013, there appears to be no change in the proportion of women registered for each presentation (approximately 40%; Table 8). For registrations, this module is in line with UK benchmarking for physics foundation courses (47% for part-time women starters, HESA 2012/13), although again it should be remembered that this is an interdisciplinary module from which students can progress to any science module at level 2.

During analysis of S104 data for our Practitioner submission, we noted that the October start was more popular with women than the February start.

As part of our Practitioner action plan we investigated this differential registration further by comparing S104 with equivalent modules from other faculties [Practitioner action P02].

Our working hypothesis was that women were preferentially attracted to October starts because these modules end in June before school summer holidays begin; February starts do not end until September. We investigated all level 1 60-point foundation modules that had two start dates per year from across all faculties (including arts, social sciences and technology). All modules show a significantly higher number of students (men and women) starting in October, compared with students starting in February, with the exception of KPY101 (Introduction to health and social sciences) and U116 (Environment: journeys through a changing world). It is unclear why these modules would be different, although consistently >80% of the students registered on KPY101 are women. Contrary to our hypothesis, however, there was no clear pattern by gender for any of the modules, including S104: the variation in popularity of October vs. February start modules appears to apply to both men and women.
We will continue to monitor the gender of students registered on S104 annually until it ends in 2017 as part of our continued monitoring of student data, and begin monitoring its replacement module S111 from Oct 2016 [Champion action C11].

In light of work at level 2 (see below), we believe it would, in future, be appropriate to continue to monitor S104 (and its replacement modules) but also to monitor, by gender, the level 1 maths module, MST124, which all students on the physical sciences curriculum must study to progress to level 2. We have not previously done this, since the module is not managed within DPS, but in future it will come under the same faculty umbrella.

Due to the module’s importance to the physical sciences curriculum we would like to include MST124 in our annual monitoring of student data, however this is already undertaken by the Mathematics and Statistics department as part of their Athena SWAN action plan.

We will obtain the results of monitoring of modules that are in Physical Science pathways but run from other Departments (e.g. the Mathematics and Statistics Department) and discuss with them any further actions that are necessary [Champion action C12].

(iii) Level 2 physics-based modules

There are four level 2 physics-based modules (Table 9).

Averaged over the time since our Practitioner submission, the percentage of women registered on S207 (The Physical World) has fallen slightly from 29% (2009-2012) to 26% (2013-2015), but since 2012 the proportion of women has been consistent. However, the proportion of women registering for S282 (Astronomy) has increased from 26% (2009-2012) to 28% (2013-2015). The overall proportion of women registered on S283 (Planetary Science), remained consistent with data presented for 2010-13 in our Practitioner submission (36%), however since 2013 there has been a steady decline in the proportion of women. The reasons for these trends are not clear, but there are broader changes in demographics across the Faculty related to fee changes and the module choices of transitional students. For example, a smaller number of students now take S283 alongside 30-credit Earth science modules (since there is no longer space for S283 in the Earth Science curriculum) These modules remain consistent with benchmarking data for part-time women on physics and astronomy undergraduate programmes (27.3% and 25.8% respectively, HESA 2012/13).
In our Practitioner submission we also noted that the gender differences in completion/pass on S207 and S282 were larger than for S283, with S207 showing the largest difference.
We committed to:
- alert the module teams to the gender differences and identify strategies to narrow the gap [Practitioner action P03]
- compare with other level 2 ‘gateway’ modules [Practitioner action P04]
- investigate why these differences may exist [Practitioner action P05]

Comparison with other level 2 ‘gateway’ modules revealed that no such gender gap existed between men and women on other pathways (e.g. chemistry or Earth sciences). The S207 module team immediately took action and ensured a female member of the module team took a more prominent role on the module’s online forum, supporting students’ academic queries. A small working group was formed, which obtained support from eSTEeM (OU scholarship centre) to look in more detail at the data on the attrition of students (e.g. assessment submissions and scores, engagement in online activities etc.) through these modules. A conference presentation on this work is given in Appendix A, but to summarise:

- For S207, women are less likely to obtain each grade of pass than men, but more likely to withdraw or to fail. Women are particularly likely to take ‘assessment banking’ (taking credit for assignments already submitted forward to the next presentation, in effect stretching the module over a longer period).
- There is no evidence that any particular question type (e.g. multiple-choice questions) is disadvantaging women more than other question types.
- There is, however, evidence that women do less well on some particular questions, and are less likely to choose ‘problem solving’ questions than questions with more scaffolding.
- There is some evidence that women struggle particularly with Newtonian mechanics, and with areas of the course and assessment questions that require particularly abstract reasoning.
- For students who have A-levels, we do not collect data about the subjects and grades. We hypothesise that the previous findings might be explained by our female students being less likely to have maths and physics A-levels.
- There is no evidence of other significant demographic differences between men and women, but women with low previous educational qualifications are particularly likely to withdraw. There is also some evidence that women for whom English is not their first language may be particularly likely to struggle.
- We have found no evidence of impact of gender of tutor or of differential tutorial attendance/participation by men and women, but in the light of findings from other universities, the S217 tuition strategy will be reviewed to see if it possible to balance tutor groups so that no women are in tutor groups with very small numbers of women.

The findings of our research into the gender gap on S207 were disseminated at three conferences in Spring/Summer 2015 and an abstract has been accepted for a paper for publication in the journal ‘Open Learning’.

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For S282, the multiple-choice questions in the exam, which are particularly complex on this module, are thought to be causing particular problems for some students.

The working team will conduct a survey of level 2 students to determine:
- their previous physics/maths background (if any)
- whether there are any language barriers
- their reason for study
- women’s and men’s perceptions of level 2 physics [Champion action C13]

The S217 and S282 module teams will review their assessment and tuition strategies [Champion action C14].

We also analysed the results of the withdrawal surveys for S207 and S282 for 2013J (results not yet available for 2014J) [Practitioner action P06].

Respondents to the withdrawal survey for S207 were roughly 50:50 (M:F), but for S282 they were 30:70. For S207, men cited mainly external reasons for withdrawal (family/life events, employment); women cited these to a lesser extent, and in addition listed study support and course materials as confounding factors. A similar pattern of responses was seen on S282, however women cited external factors to a greater degree than on S207. It should be noted that these surveys only provide a snapshot of student views as not all those who withdraw complete this survey.

In light of these results, this work has been presented at an Associate Lecturer staff development event to raise awareness of the gap in achievement, and at the Regional Academic meeting with other members of the Student Support Team.

We propose a workshop on gender in the physical sciences curriculum be included at a future Physical Sciences teaching day, to raise awareness to all staff involved in the curriculum at all levels [Champion action C15].

SXP288 (Practical sciences: physics and astronomy) was out of scope of the level 2 project because of the lack of data (only 2 presentations), but Table 9 appears to show a lower proportion of women registered than the other three modules, perhaps because it is usually studied as the final module of level 2 study, so it is more akin to a level 3 module in some regards. However, it has the highest pass/completion of any level 2 module in the physical sciences curriculum (97% for both men and women over two presentations).

(iv) Level 3 physics-based modules

There are five physics-related modules at level 3 (Table 10). The proportion of women registered for these modules is much lower than at level 2, but, since fewer women score well at level 2, this phenomenon at level 3 is not surprising. Similarly, women may wish to take a broader degree programme and so only take level 2 physics and not level 3. Overall, the percentage of women that complete each module is consistent with the percentage of women that begin the module, indicating that there is no preferential loss of women at level
3. Similarly, in general, the proportion of women that completes level 3 modules is greater than the proportion that completes level 2. This same result was seen in our Practitioner submission and we are pleased that we have maintained this success at level 3. We are pleased that women’s completion at level 3 is broadly in line with HESA graduate figures for physics courses (20%, HESA 2012/13).

### Table 10 Registration, completion and pass data for all level 3 modules

<table>
<thead>
<tr>
<th>Module</th>
<th>Presentation</th>
<th>Gender</th>
<th>% women (of total numbers at reg-25)</th>
<th>Percentage completed as % of reg-25</th>
<th>Percentage passed as % completed</th>
<th>% women (of total passed)</th>
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</thead>
<tbody>
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<td>Female</td>
<td>14%</td>
<td>68%</td>
<td>92%</td>
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</tr>
<tr>
<td></td>
<td></td>
<td>Male</td>
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<td>79%</td>
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<tr>
<td></td>
<td>2011B</td>
<td>Female</td>
<td>19%</td>
<td>73%</td>
<td>95%</td>
<td>23%</td>
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<tr>
<td></td>
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<td>Male</td>
<td>68%</td>
<td>83%</td>
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<tr>
<td></td>
<td>2012B</td>
<td>Female</td>
<td>23%</td>
<td>72%</td>
<td>87%</td>
<td>22%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Male</td>
<td>75%</td>
<td>88%</td>
<td></td>
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<tr>
<td></td>
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<td>28%</td>
<td>87%</td>
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<td>25%</td>
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<td>62%</td>
<td></td>
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<tr>
<td></td>
<td>2014B</td>
<td>Female</td>
<td>26%</td>
<td>82%</td>
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<td>24%</td>
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<tr>
<td></td>
<td></td>
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<td>73%</td>
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<tr>
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<tr>
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<tr>
<td></td>
<td>2011B</td>
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<tr>
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<tr>
<td></td>
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<td>19%</td>
</tr>
</tbody>
</table>
### In our Practitioner submission, we agreed to communicate women’s achievement to module teams, pathway tutors and students in order to build women’s confidence (Practitioner action P07).

We have asked several women who have recently graduated from the physics pathway to provide their ‘success stories’ that will be hosted on our DPS E&D website.

We will pilot a ‘Women in physical sciences’ online conference to be held via OU Live (our online classroom system), to involve undergraduate, postgraduate taught/research students, inviting recent graduates to share their success stories [Champion action C16].

We will investigate the feasibility of creating video ‘success stories’ showcasing women and men who have overcome adversity or achieved beyond their own expectations [Champion action C17].

We will investigate further mechanisms of communicating with ALs to ensure activities relating to students are effectively cascaded [Champion action C18].

### (v) Taught Postgraduate (MSc) qualification data

The Medical physics MSc programme (F50) is the only physics-related Masters programme, and this has been in teach-out, with all students who wish to obtain this qualification due for a 2015 finish. Since 2012/13, 36% of students who linked modules to F50 were women. Registrations are therefore comparable with our undergraduate physics curriculum, but are well above benchmarking data for part-time taught postgraduate courses in physics (29%)

<table>
<thead>
<tr>
<th>Year</th>
<th>Gender</th>
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<th>SXP390 Male</th>
</tr>
</thead>
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<td>74%</td>
</tr>
<tr>
<td></td>
<td>Male</td>
<td>68%</td>
<td>94%</td>
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<table>
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<th>2011B Male</th>
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</thead>
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<td>18%</td>
<td>69%</td>
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<td>Male</td>
<td>55%</td>
<td>87%</td>
</tr>
<tr>
<td>2012B</td>
<td>Female</td>
<td>22%</td>
<td>72%</td>
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<tr>
<td></td>
<td>Male</td>
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<td>73%</td>
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<td>Female</td>
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</tr>
<tr>
<td></td>
<td>Male</td>
<td>63%</td>
<td>51%</td>
</tr>
<tr>
<td>2014B</td>
<td>Female</td>
<td>21%</td>
<td>50%</td>
</tr>
<tr>
<td></td>
<td>Male</td>
<td>57%</td>
<td>77%</td>
</tr>
<tr>
<td>2014J</td>
<td>Female</td>
<td>22%</td>
<td>65%</td>
</tr>
<tr>
<td></td>
<td>Male</td>
<td>63%</td>
<td>84%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year</th>
<th>Gender</th>
<th>2015J Female</th>
<th>2015J Male</th>
</tr>
</thead>
<tbody>
<tr>
<td>2015J</td>
<td>Female</td>
<td>19%</td>
<td>N/A</td>
</tr>
<tr>
<td></td>
<td>Male</td>
<td>N/A</td>
<td>N/A</td>
</tr>
</tbody>
</table>
women, HESA 2012/13).

Of those students that registered since 2012, 40% of those awarded the qualification were women. This is better than our completion/pass data at Level 3, and exceeds UK benchmarking data for women from taught postgraduate courses in physics (28.7%, HESA 2012/13).

In our practitioner submission, we reported the popularity of the Masters programme with women, and overall women appeared to do better than men (taking distinction and merit classifications together). Combining the most recent data for F50 indicates that the proportion of women who score distinctions and merit classifications equals that of men (76%). However, proportionally more men than women scored distinctions (31% cf. 23%). This trend was also evident in our Practitioner submission.

We agreed to further analyse MSc data to identify module specific patterns of achievement by gender [Practitioner action P08].

As F50 can include several combinations of modules, 18 modules across the faculty’s masters programme were analysed and the results are presented in Appendix B. To summarise, none of the modules showed any evidence for statistically significant gender differences in pass/completion. However, for all 18 modules together, a higher percentage of women achieve distinctions (but not merits) than males, which is the opposite trend to that suggested in our Practitioner submission. The results of this analysis were shared with the Postgraduate Associate Programme Director (not a member of DPS).

In light of the launch of some of the issues identified in the analysis (Appendix B) we wish to look into this further by:

a. Considering similarities and differences between four individual (physics and non-physics) modules that clearly show women achieve more distinctions: S807, S808, SH804, and SXM810\(^5\) (Champion action C19).

b. Investigating the fall in distinctions and merits awarded to men on S825 (Champion action C20).

c. Comparing the differential pattern of women’s success on S810 between B (Feb) and K (Nov) presentations with those of masters programmes from outside the faculty (Champion action C21).

The outcomes of these actions will inform the development of a new MSc in Space Science and Technology, currently in production for first presentation in February 2017. Since all qualifications and modules need to go through internal approvals before production begins, this will ensure that issues relating to equality and diversity are considered as part of the formal sign-off process. The University expects modules to be inclusive in terms of their content and mode of delivery and publishes a guidance document for module teams to use in this respect.

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\(^5\) S807 = Molecules in medicine; S808 = Earth sciences: a systems approach; SH804 = Communication science in the information age; SXM810 = Project module for Medicinal chemistry.
The co-chair of the JAS team has given feedback on the specification of the MSc in Space Science and Technology with respect to gender and other equality and diversity issues that may arise.

The Chair of the Space Masters will ensure that:
- Case studies and examples used include men and women and demonstrate social impact of space exploration
- Images of both men and women in active scientific roles are included throughout
- Content or support delivered by academics (e.g. pre-recorded slidecasts, forum moderating) involves men and women

[Champion action C22]

(vi) Postgraduate Research Degrees

In March 2015, 32% of PhD students across all four disciplines were women (Table 11). Numbers are dependent on funding, and the increase in the number of students since 2013 reflects increasing grant success. Two postgraduate tutors handle the recruitment and support student progress.

All projects are advertised on the DPS webpage, and on the OU vacancies webpage. A broad advert for postgraduate degrees in DPS is also included in the University’s Postgraduate Degrees prospectus. The process for applying for a PhD project is explained on the website.

<table>
<thead>
<tr>
<th>Department/discipline</th>
<th>% Women FT PhD registrations (all cohorts, 2012/13)</th>
<th>% Women FT PhD registrations (all cohorts, 2014/15)</th>
<th>Benchmarking data (HESA, 2012/13)</th>
</tr>
</thead>
<tbody>
<tr>
<td>DPS as a whole</td>
<td>27%</td>
<td>34%</td>
<td>35.8% (physical sciences)</td>
</tr>
<tr>
<td>Physics</td>
<td>17%</td>
<td>22%</td>
<td>22.2%</td>
</tr>
<tr>
<td>Astronomy</td>
<td>30%</td>
<td>45%</td>
<td>27.9%</td>
</tr>
<tr>
<td>Planetary and Space Sciences</td>
<td>27%</td>
<td>38%</td>
<td>Not available</td>
</tr>
<tr>
<td>Space Instrumentation</td>
<td>-</td>
<td>18%</td>
<td>Not available</td>
</tr>
</tbody>
</table>

Table 11 shows that the proportion of women registered for PhDs in DPS has increased in all disciplines. For DPS overall, and the Physics discipline, the proportion of women PhDs is broadly equivalent to benchmarking; for Astronomy we are well above benchmarking data. We are very pleased with this improvement and we commend the Postgraduate Tutors who have worked hard to create a fair recruitment process following-on from the analysis of the data for our Practitioner submission.

In our Practitioner submission we identified that there needed to be more robust gender monitoring of PhD applications, including supervisory teams and interview panels

[Practitioner action P09]

A new application system was established from the 2013/14 recruitment round. To make the process more efficient and reliable, all the applicants are now asked to submit an official
application form, which is kept on record within the Faculty. Faculty administrators now assist in the centralisation of this process. Previously, the application form was only used once the student had been offered a position post-interview as a signal of intent to the University’s Research School; informal applications (email/CV etc.) were used for selection instead. This was not a fair system.

Table 12 shows that, overall, applications to full-time study in DPS have fallen to levels seen prior to our 2013 submission; 2013 appears to have been an anomalous year. Applications to study from women are broadly consistent with the benchmarking data for physical sciences (36%, HESA, 2012-13) and well above benchmarking data for Physics and Astronomy (22% and 28% respectively); in 2013, we reported applications from women well below benchmarking data for Physics and Astronomy so we are pleased to see this was an anomaly. We suggest that the change to the application process, enforcing the use of the application form and formalising the recording of applications, has provided more robust and realistic data than presented in our previous submission. This also ensures a fairer system by which men and women applicants can be considered for projects. Overall, we are very pleased with the improvement in the application data, however we recognise that encouragement from potential supervisors when ad hoc contact is made may still be subject to unconscious bias.

We will share our good practice here with other Juno departments via the IoP Juno network, and via SEPnet (South East Physics Network) diversity and GRADnet networks [Champion action C23].

Table 12 Number of applications to full-time PhD studentships in DPS by discipline. Space instrumentation was previously included in PSS numbers.

<table>
<thead>
<tr>
<th>Department/discipline</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
<th>Average% 2013/15</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>F</td>
<td>M</td>
<td>F</td>
<td>M</td>
</tr>
<tr>
<td>DPS</td>
<td>25</td>
<td>49</td>
<td>16</td>
<td>21</td>
</tr>
<tr>
<td>Physics</td>
<td>4</td>
<td>8</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Astronomy</td>
<td>8</td>
<td>21</td>
<td>5</td>
<td>9</td>
</tr>
<tr>
<td>Planetary and Space Sciences</td>
<td>13</td>
<td>20</td>
<td>8</td>
<td>10</td>
</tr>
<tr>
<td>Space Instrumentation</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Total applications to DPS (% women)</td>
<td>(33%)</td>
<td>(42%)</td>
<td>(33%)</td>
<td></td>
</tr>
</tbody>
</table>

Postgraduate Tutors and project supervisors decide who to shortlist for interview. PGTs keep track of shortlisting and interviews/offers results classified by gender. DPS appears to interview a larger percentage of women (43% over the last 3 years) than apply (36% over the last 3 years) (Table 13). 34% of appointed PhD students are women, however, which is similar to benchmarking data. This suggests that interview shortlisting is not suffering from gender bias.

We intend to make unconscious bias training compulsory for supervisors and PGTs to ensure a fair selection process is maintained [Champion action C24].
Table 13 Number of interviews for full-time PhD studentships in DPS by discipline. Space instrumentation was previously included in PSS numbers.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>DPS</td>
<td>19</td>
<td>29</td>
<td>10</td>
<td>10</td>
<td>13</td>
<td>26</td>
<td>39%</td>
</tr>
<tr>
<td>Physics</td>
<td>1</td>
<td>4</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>4</td>
<td>33%</td>
</tr>
<tr>
<td>Astronomy</td>
<td>10</td>
<td>14</td>
<td>2</td>
<td>5</td>
<td>6</td>
<td>10</td>
<td>38%</td>
</tr>
<tr>
<td>Planetary and Space Sciences</td>
<td>8</td>
<td>11</td>
<td>6</td>
<td>3</td>
<td>4</td>
<td>7</td>
<td>46%</td>
</tr>
<tr>
<td>Space Instrumentation</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>1</td>
<td>5</td>
<td>16%</td>
</tr>
<tr>
<td>Total interviews in DPS (% women)</td>
<td>(40%)</td>
<td>(48%)</td>
<td>(33%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

We also committed to ensuring a robust and consistent interview process e.g. consistent structure and generic questions [Practitioner action P10].

In 2013/14 the Postgraduate Tutors introduced formal panel interviews in Physics, Astronomy and PSS instead of interviews with individual academics, based on a model used in other departments. The format included consistent questions and a mixed-gender panel. In 2014/15 this was rolled out across the whole department.

To ensure a consistent and fair interview and selection process, all interviewers for PhD candidates were required to have undertaken effective recruitment training [Practitioner action P11].

All panel members had undertaken recruitment training for Physics, Astronomy and PSS interviews, and the majority had done so for SI interviews.

The HoD mandates recruitment and selection training for all involved in PhD interviews and this is monitored by the Departmental Administrator [Champion action C25].

In our Practitioner submission, we committed to collect data by gender on offers declined to establish whether female applicants are being offered positions, but are rejecting them [Practitioner action P12].

Table 14 shows the data on offers made/accepted; we only have acceptance data from the 2015 round (October 2015 starters).

Table 14 PhD place offers from 2014 and offers/acceptances from 2015.

<table>
<thead>
<tr>
<th>Department/discipline</th>
<th>2014 Offers made and accepted</th>
<th>2015 Offers made</th>
<th>2015 Offers accepted</th>
</tr>
</thead>
<tbody>
<tr>
<td>DPS (total)</td>
<td>F 4 M 8</td>
<td>F 5 M 10</td>
<td>F 4 M 7</td>
</tr>
<tr>
<td>Physics</td>
<td>0 1</td>
<td>1 0</td>
<td>1 0</td>
</tr>
<tr>
<td>Astronomy</td>
<td>1 4</td>
<td>1 5</td>
<td>0 3</td>
</tr>
<tr>
<td>Planetary and Space Sciences</td>
<td>3 3</td>
<td>2 3</td>
<td>2 2</td>
</tr>
<tr>
<td>Space Instrumentation</td>
<td>- -</td>
<td>1 2</td>
<td>1 2</td>
</tr>
<tr>
<td>Total (% women)</td>
<td>(33%)</td>
<td>(33%)</td>
<td>(36%)</td>
</tr>
</tbody>
</table>
In our Practitioner submission, we hypothesised that the low numbers of women in the PhD student body could be explained by women rejecting offers from DPS for PhD places. The data does not suggest this to be the case and, although some do reject the offers, the percentage is smaller than for men.

We will continue to monitor by gender, offers declined as a check on the attractiveness of DPS to PhD students (overall, and particularly women) [Champion action C26].

It is worth reporting that students are told about JAS activities at their induction to DPS, and made aware of the Department’s commitment to equality and diversity.

Principle 2.1.2 outlines the improvements to E&D training for PhD students.

Table 15 shows the completion of PhDs within 4 years, by gender. In line with an increase in the proportion of women in PhD places, the proportion of women awarded PhDs has increased. This is still below the UK benchmarking data for postgraduate research qualifiers (38.4% for Physical Sciences), but we are on an upward trajectory that we are keen to maintain.

Table 15 Full-time PhD completion (within 4 years)

<table>
<thead>
<tr>
<th>Year PhD awarded</th>
<th>% of females of total</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013</td>
<td>21%</td>
</tr>
<tr>
<td>2014</td>
<td>22%</td>
</tr>
<tr>
<td>2015</td>
<td>25%</td>
</tr>
</tbody>
</table>

Since 2008, 22% of students withdrawn/deregistered from PhDs in DPS were women. This is not a concerning statistic because the historical proportion of women studying for PhDs was 22%. A further 6 students moved to part-time study at the end of their 4 years, of whom 50% were women.

More information about support for PhD students (e.g. third party monitoring) is given in Principle 3.1.2.

In 2015 we collected information about the first destination of all successful PhD students, which had previously only been recorded for STFC-funded students. Of 45 graduates, at least 30 have obtained PDRA or Project Officer positions either at the Open University or at other academic institutes. Seven moved into industry, and the remainder moved into science communication, teaching or have unknown destinations. Women graduates moved predominantly into PDRA or Project Officer positions.

From 2015 onwards, the DPS admin team will record the first destination and job-role of all PhD graduates [Champion action C27].
2. Staff data

It was realised during the generation of our Practitioner submission that obtaining accurate data from HR was a challenge, largely because the data needed were not previously generated as standard for any other purpose. The JAS team have worked directly with HR to establish the data reporting specification needed for annual reports at University and Department level for all Juno/Athena SWAN activities across the University.

Data reports are now automatically produced by HR annually for dissemination to SGEG and then filtered down to departmental JAS/AS teams [Principle P13], with all departments having access to all data for scrutiny.

We will establish automatic data reporting cycles for other data required, e.g. student data, PhD completion data [Practitioner action P14/Champion action C28].

Since our 2013 Practitioner submission, the ratio of men to women has remained at 2:1; consistently 33% of the academic/research staff base are women. In light of University-wide staffing reductions, we are pleased to have maintained this ratio since 2013, although we cannot report an increase in the proportion of women overall.

The proportion of women in academic/research roles in all OU STEM departments is 39%, but this include subjects with different gender balances (e.g. health sciences), so we are comfortable with the DPS data, particularly since this exceeds the UK benchmarking data for Physics departments (17.5% women, HESA 2012/13 data).

There have, however, been small fluctuations in staff within roles (Table 16), reflecting recruitment, promotions and turnover (detailed below). For example, since 2013, there has been an increase from 37% to 42% of women in SL roles, but this reflects changes of only 1 or 2 members of staff and is not statistically significant.

Despite University-level activity to increase the number of women in Professorial positions, there have been no increases in the number of women professors in DPS since 2013, but several men have been promoted to this position; only one woman has made an application to the professoriate since 2013 but there are six women in SL positions (central plus regional academics). The existing female professor has been promoted within the professorial bands.

For more on promotions see Principle 2.1.1

We committed to raising the profile of University career development initiatives and encourage DPS staff to participate, however those activities targeting the progression of staff have been subject to review at university-level and have not yet been launched [Practitioner action P15].

We can report a steady increase in the number of women in research roles since 2012, while the number of men has fluctuated. This has been reported university-wide, with Science seeing the largest increase in women in researcher roles, including an influx of four Daphne Jackson research fellows. The proportion of women in researcher positions in DPS (32%) is
above the UK benchmarking data for that role (19% for UK Physics, 2012/13 HESA data), and we are very pleased to see this upward trend.

Four out of six regional academics are female, also above the UK norm for those on teaching-only contracts (30%, HESA 2-12/13), the best comparator with this staff group.

**DPS will contribute to research into the career choices of regional academics and share the results with the JAS team, the Department and the Faculty, including presentation at the University’s scholarship conference [Champion action C29].**

<table>
<thead>
<tr>
<th>Job Role</th>
<th>Mar-12</th>
<th>Mar-13</th>
<th>Mar-14</th>
<th>Mar-15</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>% women</td>
<td>% women</td>
<td>% women</td>
<td>% women</td>
</tr>
<tr>
<td>Professor</td>
<td>10</td>
<td>11</td>
<td>11</td>
<td>11</td>
</tr>
<tr>
<td>SL (central)</td>
<td>37</td>
<td>38</td>
<td>37</td>
<td>42</td>
</tr>
<tr>
<td>SL (regional)</td>
<td>67</td>
<td>67</td>
<td>67</td>
<td>50</td>
</tr>
<tr>
<td>Reader</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>L (central)</td>
<td>30</td>
<td>38</td>
<td>43</td>
<td>25</td>
</tr>
<tr>
<td>L (regional)</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>75</td>
</tr>
<tr>
<td>Researcher</td>
<td>21</td>
<td>25</td>
<td>31</td>
<td>32</td>
</tr>
<tr>
<td>Total</td>
<td>29</td>
<td>33</td>
<td>34</td>
<td>33</td>
</tr>
</tbody>
</table>

More information about recruitment is given in Principle 2.2.1.

Turnover data (Table 17) were reviewed to determine whether DPS remained an attractive department to work in, and investigate trends not reflected in the snapshot data in Table 16. In line with University data, the greatest turnover is seen in the researcher category, where fixed-term contracts, and hence involuntary leavers, prevail.

The number of leavers since our Practitioner submission has decreased. At the time of our Practitioner submission we had just come out of a period of restructuring and redundancy, so these more recent data are not surprising. However, since then, a university-wide enhanced voluntary severance/early retirement programme has continued, which has led to the loss of some academics at senior levels, mainly via enhanced early retirements. As Professorial staff in DPS were overwhelmingly male, no conclusions can be drawn about whether this process has been gendered. The University policy has been to not replace retirees or other leavers unless there is a clear operational need, and staffing reductions are likely to continue.
Table 17 DPS turnover. Data for the reporting points March 2012/March 2013 are combined.

<table>
<thead>
<tr>
<th>Job role</th>
<th>Male Staff % of total leavers (ALL)</th>
<th>Male Staff % of total leavers (ALL)</th>
<th>Male Staff % of total leavers (ALL)</th>
<th>Male Staff % of total leavers (ALL)</th>
<th>Female Staff % of total leavers (ALL)</th>
<th>Female Staff % of total leavers (ALL)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Professor</td>
<td>100</td>
<td>0</td>
<td>100</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>SL</td>
<td>100</td>
<td>0</td>
<td>50</td>
<td>50</td>
<td>100</td>
<td>0</td>
</tr>
<tr>
<td>Lecturer</td>
<td>100</td>
<td>0</td>
<td>No leavers</td>
<td>No leavers</td>
<td>100</td>
<td>0</td>
</tr>
<tr>
<td>Reader</td>
<td>100</td>
<td>0</td>
<td>79</td>
<td>79</td>
<td>100</td>
<td>0</td>
</tr>
<tr>
<td>Researcher</td>
<td>79</td>
<td>21</td>
<td>21</td>
<td>21</td>
<td>100</td>
<td>0</td>
</tr>
<tr>
<td>Total leavers</td>
<td>84</td>
<td>16</td>
<td>78</td>
<td>22</td>
<td>100</td>
<td>0</td>
</tr>
</tbody>
</table>

1.2.2 Obtain qualitative data from staff.

In our 2013 Practitioner submission we presented results from the University’s biennial staff survey (2012). However, in addition to there being problems with these data, as outlined in Principle 1.2.1, this information is also not disaggregated by gender or job role at either Faculty or Department level, so no gender analysis is possible aside from at University-level.

The SGEG group has successfully lobbied the OU’s statistics team to provide department data, by gender, for all future staff surveys.

We will analyse and monitor the responses from DPS staff to the University’s biennial surveys, and report the results to the JAS team and DMT [Champion action C06].

University wide, in 2014’s survey, 67% of respondents were women, slightly down on previous years, reflecting an overall change in the OU’s staff demographics (not reflected in STEM departments). Women continue to score more positively than men on almost all measures.

Since 2012, both male and female DPS staff have reported improved work-life balance, a decrease in work-related stress and a belief in the University moving to a more student-focused outlook. This is opposite to University-wide trends, which is pleasing.

In our Practitioner action plan, our HoD committed to send weekly messages to DPS members regarding outcomes/decisions from DMT and FMT meetings. Although we cannot claim causality, we do see an increased satisfaction with management that is not reported University-wide [Practitioner action P16].

DPS also reported increased satisfaction with opportunities for promotion and satisfaction with pay, decreased work-intensity and increased job security. These results mirror University-wide trends and reflect a period of (relative) stability following a period of
Restructuring and staffing reductions that impacted on the 2012 survey results.

However, DPS showed decreased satisfaction with colleagues, fit to the institution and feedback on performance compared to both 2012 and the rest of the University in 2014.

While some of these issues, particularly those where DPS may have regressed, are disappointing, they can be tackled via our JAS action plans. However, the root causes were unclear; hence we launched a DPS-wide survey in 2015.

This survey follows from a successful pilot survey in early 2014 in which all staff and PhD students were asked their opinions on the structure of the department management, with the respondents overwhelmingly favouring the discipline structure be maintained [Practitioner action P17].

The survey was designed by the JAS team to incorporate issues of relevance to JAS objectives and Juno principles, and also broad issues of relevance to DPS (e.g. the need for feedback). The survey was launched by the University’s Institute for Educational Technology (IET), who also collated the results and reported them to DPS for the JAS team to analyse.

Results were discussed at the 2015 all-staff summer meeting [Practitioner action P17].

The response rate was 54% (see Principle 1.2.2 for a discussion of this) and 43% of respondents were women – higher than the proportion of women in DPS. Results of the survey are interspersed throughout this narrative where relevant to Juno Principles, with Champion actions linked where relevant. Below we outline some of the overall results:

Positives
- 60% of respondents said DPS was a great place to work; 17% thought it was not
- 73% of respondents agreed that line managers were supportive of requests for flexible working (see Principle 5).
- 63% of respondents agreed that DPS meetings were held within core hours (see Principle 3.1.1).
- 66% of respondents agreed that successes are celebrated in the department, whatever the achievement.
- 59% of respondents agreed they were actively encouraged and given opportunities to represent DPS externally/internally.
- 70% of non-neutral (staff) respondents agreed they were actively encouraged to take up career development opportunities; for PhD students this was 61% (Principle 3.1.3).
- 59% of non-neutral respondents agreed that DPS has a clear and fair workload allocation system (Principle 4.2).

Areas to improve:
- Positive and negative responses regarding promotion processes were roughly equal, but most negative responses were from those on fixed term contracts or those on non-academic grades.
- Positive and negative responses regarding staff perceived ‘value’ were roughly equal,
but negative responses were mainly from those on fixed term contracts or those on non-academic grades.

- 72% of non-neutral respondents agreed that staff who cannot work long hours are disadvantaged

Questions relating to individual line management/managers were more positively responded to than similar questions relating to OU management, consistent with results of the University-wide survey.

JAS activities have also been reported in monthly DPS newsletters and DPS academic staff meetings, but as discussed in Principle 1.1.2, meeting formats have become more flexible and there are no longer standing items.

**We will use the new DPS Equality and Diversity intranet to communicate with all DPS members about JAS activities [Champion action C30].**

**The JAS team will raise awareness of key issues via poster campaigns, with posters positioned in key areas including communal areas [Champion action C31].**

The draft submissions, action plans and data have been discussed by the JAS team, the DMT, FMT and SGEG. The draft document was also open for all-DPS consultation for a period of one week prior to submission, via the E&D intranet page.

**1.2.3 Identify any discrepancies in gender representation and/or progression and identify factors that might be causing them**

The action plan has emerged from the data interrogated for this submission and the consultation described above. Discrepancies are discussed throughout this narrative.

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**Principle 2**

**Appointment and selection processes and procedures that encourage men and women to apply for academic posts at all levels**

2.1 **Ensure that processes and procedures are fully inclusive**

2.1.1 **Ensure career breaks are taken into consideration**

DPS supports those who have taken career breaks, following the University policy in this area. For example, the Faculty now has four Daphne Jackson fellows, of which two are within DPS.

The University has recently issued a revised promotions scheme (See Principle 3.2.1 for DPS promotions data), which recognises the impact of career breaks and uses a declaration system akin to that of the special circumstances consideration in 2014 REF. The new promotion criteria have explicit ‘teaching’, ‘research’, ‘teaching and research’ and
‘knowledge exchange’ routes that can suit an individual’s own portfolio.

As this promotions scheme will operate alongside the existing scheme until 2017, it is not possible to assess its impact yet, but we will begin to monitor the use of special circumstances as we collate data annually on promotions within DPS [Champion action C32].

Of the DPS staff included in the 2014 REF, most were submitted to UofA7 (Earth Systems and Environmental Sciences). This was a faculty-level decision, deemed appropriate due to the large number of planetary science researchers in DPS. 58 full-time equivalent academic staff were included in the UofA7 submission, of whom eight had “special consideration”. Of these, five were women and three were men. Although this number is not just for DPS, it demonstrates that our staff are supported in their research careers, and that special consideration is given to staff who take career breaks. A small number of staff from DPS were also submitted to UoA13 – four men and three women.

2.1.2 Gender awareness included in training for all staff who interview

1. Equality and diversity training

All staff new to the University are encouraged to undertake equality and diversity training via the Diversity Compliance eLearning module as part of their induction. This module, which includes a section on gender awareness, is provided by the University’s Equality and Diversity Team. Completion of the module is recorded via the University’s Learning Management System (LMS), which can be interrogated by the Department Administrator.

Additional diversity training is available from the University’s HR Staff Development Team.

We undertook a survey of historic uptake of E&D training, and have encouraged all staff (existing and new) to undertake the Diversity Compliance eLearning module by running a feature on this in the monthly newsletter, outlining the reasons why E&D training is important. This has also been discussed at DPS staff meetings [Practitioner action P18].

This has also been added to the DPS induction checklist and linked from the E&D page on our intranet.

We have seen a modest increase in the number of staff taking the module, particularly new starters. However, we believe the number recorded could be an underestimate because completion is not recorded unless staff enter the E&D training via the LMS system; the training can be accessed independently of this.

Our survey results support this suggestion, with 68% of staff reporting having completing E&D training; however this survey response may be explained by some long serving staff having undertaken alternative training when the University mandated E&D training.

E&D training is no longer mandated by the University, and so our initial approach has been to encourage staff to engage with this (as described above).
We will require all those who have recruitment, line management (including student supervision), appraisal and management responsibilities to have completed this E & D training, and strongly encourage all members of staff to do so, by adding this to a Career Development and Staff Appraisal training checklist (CDSA, see Principle 3.1.1) [Champion action C33].

Further, PhD students were not able to access the University’s E&D training, which we felt to be unacceptable. We, with support from the Faculty’s Director of Postgraduate Studies, have successfully lobbied the University to have a mirror site of the staff Diversity Compliance eLearning module on the Virtual Research Environment (VRE) for all (university-wide) PhD students to access. This was offered from October 2014. In DPS, the Postgraduate Tutors have encouraged students to complete this as part of their induction. Unfortunately, the technology prevents direct monitoring of uptake via this system due to IT constraints; the E&D training directly mirrors the staff training, but does not have the background staff database to be able to record completers.

We encourage all DPS PhD students to undertake this training as part of their induction to the University and to include this on their skills audit [Champion action C34].

We will garner support from other Science departments, and the Science Director of PG Studies to lobby the University Research School to include completion of E&D training as a condition to passing probation for PhD candidates [Champion action C35].

2. Unconscious bias training
The OU does not offer Unconscious Bias training. However, in 2014, training was offered to all staff/students in DPS as a benefit of our membership of SEPnet. This was delivered by Prof Averil Macdonald within the department but turnout was disappointingly low (only eight attendees, all of whom were members of the JAS team). We repeated this training in October 2015, delivered on campus and via OU Live (OU’s virtual classroom system) to enable those working remotely to take part. We were extremely pleased that 25 members of staff took part (10 remotely). We will hold further unconscious bias training events for staff at least annually [Champion action C36].

In 2014, an Unconscious Bias training session was also offered to all PhD students, coinciding with their DPS induction training; 9 new students attended and the session was broadcast live to PhD students at 3 other SEPnet institutes. In October 2015, a further session was held and 16 students attended; this was not broadcast, as other SEPnet institutes have begun holding their own Unconscious Bias sessions.

We will offer further Unconscious Bias training sessions as part of the DPS student induction training [Champion action C37].

CDSA training checklist to be developed to encourage those who have not completed
recruitment training, unconscious bias training and/or the Diversity Compliance eLearning module [Champion action C38].

### 3. Recruitment and Selection training

Diversity is also embedded in the University’s Recruitment and Selection Guidelines. For example, the University provides guidance on the wording of job specifications and the gender balance of interview panels (also see Principle 2.2.1).

The guidelines are generally interpreted to mean that all chairs of interview panels must have undertaken formal OU recruitment training; panel members are not obliged to do so, but guidelines expect the panel chair to establish that there is sufficient expertise to conduct the interviews fairly. The University also do not require staff to refresh their recruitment training after a defined period of time.

As part of our Practitioner action plan, we analysed the uptake of recruitment training to identify those staff that had not undertaken formal training in the last 2 years (see Appendix C) [Practitioner action P19].

The JAS team undertook a review of recruitment training in the university over the last 7 years (Appendix C) and revised this action to recommend that training needed to be refreshed if it had not been refreshed since 2010. This was because the Equality Act was enacted in 2010, which resulted in additional diversity material being introduced into the University’s formal recruitment training.

The LMS provided several different recruitment training options over the period 2010-14 but in 2014 these were harmonised into:

- Recruitment and Selection online module (0.5 days)
- Selection Interviewing Skills (1 day) – a face-to-face follow-on from the online module

Until 2014, only 7 academic/research staff had completed any recruitment training since 2010, yet the majority of DPS academic (and some research) staff are involved in recruitment of other staff and PhD students. This also includes regional academics, who are responsible for the recruitment of ALs, and staff who may be on the internal selection panels for fellowship schemes (e.g. Ernest Rutherford and Aurora fellowships) (See Principle 2.2.1).

Only 1 member of staff had completed the Selection Interviewing Skills training between 2010 and 2014.

The University does not mandate or monitor recruitment training. They also do not monitor panel composition or training. However, on the basis of our recommendations (Appendix C), the HoD, in early 2015, mandated the Recruitment and Selection online module for all panel members, and the Selection Interviewing skills training for panel chairs. This led to a further 10 staff undertaking the training (3 women and 7 men), making a total of 17 staff that have had interview training since 2010. We are very pleased with this upturn in training and the new HoD is continuing this mandate.
The Department Administrator will continue to monitor the uptake of recruitment training, unconscious bias training and E&D training and report to the JAS team and DMT [Champion action C39].

In our 2013 Practitioner submission we committed to investigate the possibility of holding a dedicated recruitment training day in DPS [Practitioner action P20].

We have discussed this with University’s HR team, but they are unable to support a DPS-specific training event and refer to the preferred use of the online training module that staff can access flexibly. We would prefer to be proactive in encouraging staff to undertake training and make it as easy for them as possible to engage.

We will book a computer suite for a day to enable staff to come and take the recruitment and E&D training, with refreshments as incentive. If the event is successful, a second event will be opened faculty-wide [Champion action C40].

The HoD committed DPS to including at least one woman on each interview panel, except if there is a justifiable reason why it is not possible (logistics, for example). There was at least one female member (often more) on the panel for all the regular PhD interviews for the 2015 start.

In our Practitioner status we committed to obtaining annual reports on the gender ratio of interview panels for DPS recruitment for monitoring [Practitioner action P21].

We have been unable to obtain historic recruitment panel information from the HR department who keep these records; panels are not organised by the DPS admin office. However, the Faculty Staffing Team now provide the Department Administrator with this information whenever a panel is organised.

The Department Administrator will monitor the composition of panels to ensure they are gender balanced and that all panel members are adequately trained [Champion action C41]. This will be reported to the HoD and JAS team.

The HoD will intervene if any panels are not mixed gender, or if the panel is not adequately trained, to ask the chair to justify their choice of panel and to request a change [Champion action C42].

We also committed to producing a best practice guide on interviewing [Practitioner action P22] for DPS, which would incorporate our stance on mixed-gender panels and training that are absent from the university training.

We have not yet completed this, so we will implement it as part of our Champion action plan and host it on the new DPS intranet site [Champion action C43].

We have also discussed the absence of explicit E&D guidance on panel composition within the recruitment training materials with the head of the OU’s Equality and Diversity team as
they are currently looking to improve E&D coverage within training materials across the University.

### 2.1.3 Provide induction for all new staff, including research assistants, on appointment

All staff are provided with an induction within DPS, which is based on best practice guidelines issued by the University. The Department Administrator provides the initial introduction to DPS, focusing on logistics, University policies and procedures and health and safety.

We agreed, in our Practitioner submission, to review the DPS induction process and implement improvements, if required, based on best practice from other departments. We have not yet fully achieved this objective [Practitioner action P23], although the Diversity Compliance module is on the induction checklist.

However, the DPS administrator is contributing to a review of induction across the Faculty, where she is championing the inclusion of gender and other diversity issues into the new processes.

A DPS “Survival Guide” is given to all new starters when they first join the department as a way of welcoming them to the team. It provides an overview of how things are co-ordinated in the department, including details of the induction materials, health and safety, as well as general staffing information. From 2015/16, the same information will be available on the DPS intranet site.

In our Practitioner submission we committed to ensuring that the Survival Guide was up to date [Practitioner action P24].

This action was in progress, with a draft under discussion, however, in light of the launch of the DPS intranet, it is preferred to use that as the main route of dissemination for relevant information.

E&D-related policies (incl. flexible working) will be included in the induction checklist and on the intranet [Champion action C44].

### 2.2 Take positive action to encourage under-represented groups to apply for jobs

#### 2.2.1 Monitor applications, shortlists and appointments, looking at the proportion of women (internal and external) at each stage

Recruitment data were included in the data specification we devised with HR (see Principle 1.1.2), however this has still proved to be unreliable and inaccurate for our purposes.

Instead we continue to receive staffing reports from the Faculty staffing team [Practitioner action P25] as this can also allow an analysis of internal versus external candidates.
Recruitment data for DPS are split into normal (competitive) vacancies and direct appointments (named candidates, contract renewals). Since 2012 (when data collection began), 32% of applicants to competitive vacancies were women.

Over this time period, there have only been two central academic appointments by competitive appointment, one of which was reported in our 2013 submission (a woman was recruited into a senior lecturer position in 2012 and 47% of the applicants for that post were female). A lecturer position was offered in 2014/15. For this position, only 11% of the applicants were women, one was shortlisted (14% of shortlisted candidates) and a man was appointed.

Two regional academics were appointed in 2014/15. 40% of the applicants were women, and 60% were shortlisted. One man and one woman were appointed. Although there are low numbers here, this compares favourably with the proportion of women recruited into teaching-only contracts in physics across the sector (32.4%, HESA 2012/13), the closest HESA comparison with this group of staff.

In 2014/15 five PDRA positions have been advertised via competitive recruitment (excluding those appointed as research fellows or via contract renewals). All of these were fixed term positions. 32% of the applicants, 41% of the shortlisted candidates and 75% of the appointees were women (one position was unfilled).

We are pleased with this increase in the proportion of women appointed into these roles compared to where we were at the time of our Practitioner submission (26% of applicants, 24% of interviewees and 27% of appointees to PDRA positions were women in 2013). We are also pleased because we recruit a higher proportion of women into DPS on research contracts than the UK norm (which is 20% women for physics departments, HESA 2012/13).

As part of our Practitioner action plan, we committed to ensuring that the DPS website included images of DPS women to demonstrate its attractiveness as a place for women to work. This work has begun, with images of men and women added, particularly depicted as active researchers [Practitioner action P26].

The work on making the DPS website more inviting for everyone that visits it will continue [Champion action C45], particularly on the research pages and the vacancies for PhD students.

We are therefore pleased to report that research vacancies have attracted predominantly external candidates, suggesting we have improved our attractiveness for women applicants since our Practitioner status.

Although we cannot claim causality, and the numbers of applicants/interviewees and appointees presented are low, we could claim an improvement in the recruitment of women into DPS. There has been no overall increase in the proportion of women in the staffing base, however, because of the turnover of male staff (Principle 1.2.1) and more male direct appointments. Direct appointments may be those that are: (i) via external grants where a
‘named candidate’ is common, (ii) via external fellowships (e.g. Daphne Jackson, Royal Society or Ernest Rutherford schemes), or (iii) via contract renewals when funding is extended.

Since 2013 there have been 28 direct appointments, all into the researcher category; 25% of these women. The dominance of direct appointments corresponds with the number of researchers recruited into fixed-term contracts (Principle 1.2.1). Regardless of the entry route, this reflects successful grant income consistent with a thriving research environment.

Since 2014 there have been 40 fellowship proposals submitted by candidates wishing to work within DPS. These include applications to STFC, The Royal Society, Marie Curie, UKSA Aurora and ERC. Of these 40 applications, 31 were from men and nine were from women (22%), however the number of applications from men include several repeat applications and are therefore not representative of absolute numbers. Eight of the 40 applications were successful, with the proportion of women successful (25%) commensurate with the proportion women applicants.

We also committed to launching a DPS ‘Values and Expectations statement’ [Principle P27]. This is now the landing page text on the E&D website/intranet pages (Figure 6 and Figure 7).

We will ensure this is added to the induction checklist and intranet [Champion action C46].

Although part of each job description is defined by DPS staff, the bulk of its wording is standard and devised by the University. An analysis using the Textio online tool of two job adverts written by DPS staff revealed that overall, the wording presented as more feminine than male. However, they were:

- Too passive and conveyed a sense of formality that could be off putting for candidates
- Too wordy, with overly long sentences
- Lacking in bulleted content that can allow potential applicants to get a quick overview of the position.

We will look at addressing the wording of future adverts written by DPS staff, obtaining guidance from HR where required [Champion action C47].

Vacancies are advertised on University, not DPS web pages, so this is a difficult area to change. Activity is also being taken via the University SGEG, including working with HR to revise job specifications and adverts, and the University vacancy page is under review. The University-level work will benefit DPS and those members of the JAS team that are part of SGEG will contribute directly to this activity. We do not wish to duplicate effort, however we have requested that the Juno and Athena SWAN logos be added to all DPS job adverts, and an E&D statement has been approved for inclusion. As this was being compiled, it was found

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6 Textio is an online tool that analyses job adverts to identify key phrases and bias that may have a negative impact on recruitment. It is available here: [https://textio.com/](https://textio.com/)
that there was no equivalent faculty statement, and the JAS team have provided suggested wording for inclusion on all science jobs.

**In our Practitioner submission we agreed to review the informal networks available for advertising appointments to ensure that women in STEM networks are reached, which may not be influenced by changes to job specifications or adverts [Practitioner action P28].**

We have not yet begun to do this, and so this action is rolled forward to our Champion action plan [Champion action C48] with activity to benefit the advertising of posts via the Space SRA.

However, in the DPS survey we asked whether staff/students believed DPS encourages men and women to apply for posts in areas where they are under-represented. Over half of the respondents gave a neutral response, however of the remainder, 73% said they did.

### 2.2.2 Identify any discrepancies and investigate why this might be the case, taking action as necessary

In light of an apparent increase in the researcher role within DPS and across the University, we analysed the data available on the proportions of permanent (P) and fixed-term contracts (FTC) staff in DPS by gender. Most FTCs are within the researcher role, as expected.

Since 2013, there has been an increase in the proportion of women on FTCs in the researcher role (30% to 37%), as well as an increase in numbers of both men and women in this role. This reflects the improved recruitment of women into researcher positions as outlined in Principle 2.2.1.

The overall proportion of women on permanent contracts in DPS has decreased (35% to 29%), reflecting a decrease in the number of women due to turnover.

There are further discrepancies in the recruitment data for direct appointments that makes any further analysis of trends in this process difficult. One reason for this is the appointment of staff into STEP vacancies (PhD-PDRA bridge). These positions are not officially ‘recruitment’ – they are only available to 3rd Year PhD students on STFC funding with an already funded STFC PDRA position to look forward to. However, these appointments do appear in the data from HR. Where more than one student is eligible, a competitive process, handled by postgraduate tutors, and then ultimately the HoD, is used. The gender balance of these applications is therefore constrained by the demographic of those students in their final PhD year.
### Principle 3

**Departmental structures and systems which support and encourage the career progression and promotion of all staff and enable men and women to progress and continue in their careers**

#### 3.1 Transparent appraisal and development

#### 3.1.1 Appraise all staff, including researchers and PDRAs

The University has a clear and robust career development and staff appraisal (CDSA) process, which is compulsory and thus adopted by all departments. CDSAs occur annually for all staff who have been in post for a year (including PDRAs and other fixed term staff), usually during May-July when staffing workloads are also under consideration for the coming academic year (see Principle 4.2.1). Staff are told who their appraiser will be during induction; this is usually their line manager, but alternative appraisers can be requested.

Prior to the CDSA meeting, staff are asked to complete paperwork outlining their progress towards previous objectives and their preliminary objective setting for the year; and they are also encouraged to seek feedback from colleagues to aid the discussion. Following the CDSA meeting, the appraisee completes a further self-assessment section of the paperwork, and the appraiser adds their comments. Both sign the form, signifying agreement to everything documented, and an electronic copy is sent to the Deanery for consideration and sign off by the Dean, and for archiving. A copy of the signed CDSA paperwork is then returned to the appraisee.

CDSA completion (submission of completed appraisal documents) is monitored by the Faculty, and the Dean is required to report to the University on an annual basis about the percentage of staff who have completed CDSA.

In our Practitioner submission, we identified that only 40% of staff were recorded as having a complete CDSA record in the prior 12 months, however 75% of staff claimed to have been appraised. This suggests that, in many cases, the paperwork has not been completed in its entirety, but that the CDSA face-to-face meetings were held. Our belief had always been, however, that the paperwork is secondary to the appraisal process itself.

As part of our Practitioner action plan we committed to improving CDSA engagement towards 100% [Practitioner action P29] and feedback from the Practitioner panel asked us to ‘look at how to achieve a higher uptake of appraisals’.

What was unclear at the time of our Practitioner submission was where in the process the completion of paperwork stalled. We conducted an analysis of CDSA completion in autumn 2014 and found that of those staff eligible for CDSA, only 38% recorded a completed CDSA. There was no trend with gender.

In light of this, the DPS admin team identified where in the process each CDSA had stalled by contacting the appraisee/line manager/faculty and reminded the ‘bottleneck’ of the status of the CDSA. By November 2014, 69% of staff were recorded as having had a CDSA meeting; 18 people recorded no appraisal activity at all.
At that time (November 2014), 80% of women had an appraisal meeting, compared with 64% of men. Of those staff appraised, only 55% had CDSA sign off from the Deanery (63% women, and 48% men).

A further review of the CDSA process early in 2015 revealed that 86% of staff recorded having had a CDSA meeting, which was a significant improvement towards our target of 100% having been appraised. Approximately 10% of these, however, were still in train within the Deanery.

The final data for the 2015 CDSA round is not yet available.

In light of the success of the tracking in identifying pinch points, the DPS admin team now, as a matter of course, records each stage of the process (outlined in Appendix D) allowing them to keep track of each individual’s CDSA. Although not without inaccuracies, the new DPS recording system is still an improvement on previous years where no knowledge of meetings or paperwork was kept in-house.

The reasons behind low completion figures, and the relationship to gender, was not clear. There are several reasons that may explain the data (outlined in Appendix D). What is even more surprising, however, is that, although CDSA is not mandatory, only those staff who have a complete CDSA on record can be considered for a merit award, and any appraiser with outstanding CDSAs for their staff cannot be considered. It was not clear why this was not a sufficient incentive for engagement with CDSA.

To find out more about staff engagement in CDSA, we included questions relating to CDSA in the DPS staff survey [Practitioner action P17].

Like other questions, neutrality was in many cases the majority response, so the following analysis is based on low numbers. However, it should be noted that most neutral responses were from academic-related staff and PDRAs/other staff on fixed-term contracts (see below).

44% of respondents believed the CDSA took into consideration quality rather than quantity of work, with twice as many women as men believing this to be true. 53% (43% of whom were women) of respondents believed the appraisal was appropriate to their needs but only 39% thought their last CDSA was helpful. This dichotomy required further analysis and it was found that:

Of those that agreed that the CDSA process was helpful:
- 74% also thought that it was appropriate to their needs
- 61% agreed that the CDSA process takes into account quality of work rather than quantity.

Of those that felt that the CDSA process was unhelpful:
- 21% felt that it was appropriate for their needs
- 42% felt that it was not.

To support our working hypothesis that the appraisal meeting is the most important aspect
of the process, we looked in detail at those that did, or did not, report they had received completed paperwork.

Of those that received completed paperwork, 84% considered the advice they received to be appropriate to their needs. Of those that did not receive completed paperwork, only 41% thought the advice was appropriate. Negative responses were all given by academic-related staff and PDRAs.

Negative responses from academic-related staff, although disappointing, were not unexpected; there is no explicit promotional path for academic-related and support staff and (anecdotally) several feel a ‘career development’ meeting to be inappropriate.

We recognise that the CDSA process is a one-size-fits all approach when it comes to career development. For academic staff it addresses career progression within the institute but for academic-related staff and PDRAs it (generally) addresses preparing for a role outside the organisation. This career development aspect may not be clear to PDRAs, and so they may believe the process to be of less value.

<table>
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<tr>
<th>In our Practitioner submission we committed to including a ‘benefits of CDSA’ section in the DPS survival guide [Practitioner action P30].</th>
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<tr>
<td>A draft of this section has been generated, however, this will now be included on the DPS intranet page [Champion action C49].</td>
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Those that claimed to not complete any paperwork had negative or neutral responses to the advice they received. Those that received it back from the faculty had a more positive view of the value of the CDSA advice they received. Thus, our hypothesis that the meeting is the most important aspect of the CDSA process may not be true, and instead the CDSA signoff validates the importance of the process. It may also add a sense of ‘value’ for individuals.

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<tr>
<th>This validates our continuing objective to push towards 100% of all staff engaging and having completed the CDSA process [Champion action C50].</th>
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We included a feature on CDSA in the monthly DPS newsletter, and a JAS team member presented the benefits of CDSA at a DPS staff meeting.

The JAS co-chair has also met with the Science HR partner and Learning & Organisational Development contact about possible staff development activities that could engender further support for CDSA within DPS. Although HR-led bespoke training was not possible, DPS held a self-directed internal training session for all appraisers and further sessions are planned.

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<tr>
<th>The DPS HoD will hold an annual meeting for all DPS appraisers and write a good practice guide for appraisers and appraisees [Champion action C51].</th>
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A CDSA training ‘checklist’ will be introduced to enable appraisers to identify that their staff have engagement in the required formal training appropriate to their needs, including
recruitment and selection and equality and diversity training. This will be informed by annual monitoring of training by the Department Administrator [Champion action C38].

PhD students continue to be monitored on a 6-monthly basis, with reports written by the students and the supervisory team and signed off by the Faculty’s Director of Postgraduate Studies. The reports are then returned to students. All students in DPS have up-to-date progress monitoring reports.

3.1.2 Mentoring scheme in place with training and guidance for both mentors and mentees

All new DPS academic staff are allocated a mentor who is intended to stay with them through their probation period. This is a policy put in place by DPS – it is not standard across the University.

As part of our Practitioner submission, we committed to discuss with the Faculty the establishment of a mentoring scheme for all staff (including PDRAs), which would be informed by the University’s mentoring guide and the outcomes of the University Athena SWAN action plan [Practitioner action P31].

Activity at faculty-level identified that formal mentoring should be more appropriately linked to individual circumstances (e.g. probation, promotion), and DPS have adopted this approach, with several members of staff (at all career stages, in all job roles) allocated mentors to support them with specific tasks or roles.

However, in our DPS survey, twice as many people said they were not offered useful mentoring opportunities as those who said they were. These negative responses came from staff in all job roles and there was no trend by gender. These results may reflect the informal approach adopted by DPS, or be from long-term staff who are not aware of the changes being implemented for new staff. However, twice as many people said they did not want to be allocated a mentor as said they would (no trend with gender). It may be that staff are not aware of the value of mentoring until they have experienced it; when asked what they would hope to gain from having a mentor, comments were overwhelmingly focussed around career progression.

In our Practitioner submission we identified that PDRAs were anomalous in that they did not receive a mentor on arrival. Since 2015, a PDRA network has been set up, which can provide peer support (See Principle 4.1.3).

DPS will ensure that all staff recruited into the department (including PDRAs) are offered a mentor for their probation period [Champion action C52].

DPS will use an existing AL mentor/mentee guide to create a guidance document to mentors/mentees, hosted on the DPS intranet [Champion action C53].

The department will also increase its use of informal mentoring for all staff at every career stage, for specific tasks e.g. submission of 1st research grant or module writing. Regular emails from the DMT will be used to keep staff informed of mentoring opportunities.
The University Athena SWAN action plan included the development of a coaching and mentoring programme to focus on women in senior roles, including specific development support in preparing cases for promotion. In light of additional university-level concerns over the number of women in senior roles, a training programme was established (by a group independent to the Athena SWAN activities led by SGEG) that SGEG hoped would fulfil their action. A pilot event was launched that was open to women (and men) from across the University, but places were strictly limited and no one from DPS was able to attend.

The HoD committed to encourage women to participate in the Aurora Leadership programme, which one woman did in 2014. Two others were nominated in 2015 for consideration at university level but were not accepted [Practitioner action P32].

The woman who attended in 2014/15 said:

‘It very much helped me to see many others facing similar challenges to the ones I meet. The “life stories” of role models also had a strong impact and significantly changed the way I viewed career progression. Although I could not always entirely relate to different career paths, the most useful session for me was the one on core leadership skills that I would recommend to everyone. What I learnt is that my motivation for leadership is probably different from most, but it is certainly a worthwhile one. I also learnt how to reconcile my ideals of fairness and equality with the leader role, and as a result I feel much more confident and comfortable in putting myself forward for a leadership role.’

We will continue to encourage women to attend the Aurora Leadership programme, focussing particularly on women in the early stages of their careers [Champion action C55].

Three women in the department have attended the University’s Academic Leadership Development Programme. This programme is designed for staff at lecturer, senior lecturer and Professorial grades and offers the opportunity to work with others from across the University on a range of personal and institutional academic leadership activities. One women, who attended in 2014 said:

“I found the ALDP challenging and reassuring in equal measure. I learnt a huge amount about how academic leadership is different from, and how it is similar to, leadership in other contexts. I also learnt a huge amount about myself. Half-way through the course I felt entirely out of my depth, by the end of it I had worked out the direction for the rest of my career, and I have since been appointed to a senior management position.”

PhD students are allocated a third party monitor as standard university practice. Students are not obliged to call on their third party monitor, but dates of meetings are reported as part of the 6-monthly progress report process. Monitors are all are experienced PhD supervisors with no direct or indirect link to each student’s project.
the third party monitoring system [Practitioner action P33].

We have not yet done this, but will carry this action forward into our Champion action plan [Champion action C56].

We will also investigate the gender balance of supervisory teams and student support (e.g. third party monitoring) [Champion action C57] and redress any imbalances with appropriate third party monitors.

The Postgraduate Tutor on the JAS team initiated a survey of PhD students to try to understand how to improve the training they have access to, as many students have stated that they find university-level postgraduate training too generic for their needs. Of the 17 students who participated, the majority highlighted the need for more specialised “core skills”, such as programming languages and statistics.

Thanks to the Gradnet lecture series, established in 2014, students now have access to Python, statistics, C/C++, mathematica, advanced maths etc. The Postgraduate Tutors have put together a diverse programme for 2015/16 academic year based on suggestions from students.

Our students also pointed out that in specific research areas there is the need for very specialised training that supervisors cannot always offer: for this reason it was suggested that postdoc/3rd year students could provide lectures to new students, providing them with some experience of teaching that may benefit their academic careers.

The Postgraduate Tutors will ensure that there is a balance in the gender of those who deliver the training and report this to the JAS team annually [Champion action C58].

3.1.3 Ensure all staff, including PDRAs, have access to impartial career guidance

The University Careers Service do not offer advice to staff, although they can access their extensive online library of resources, but they do offer advice to PhD students; feedback from them was that this had a very low uptake. The Careers Service has recently helped with content for the new ‘Virtual Research Environment’ website aimed at Research Students which includes a ‘training zone’ where E&D training is now hosted.

As part of our Practitioner submission, we committed to raise awareness of the University Career’s Advisory Service among DPS PhD students and staff [Practitioner action P34], which we did via the DPS newsletter, and via communication from the Postgraduate Tutors and on the DPS intranet.

The University Careers Service is accessible to all OU taught UG/PG students via their Studenthome page (their landing page on the OU website).

Via SEPnet, DPS now has an Employer Engagement Officer whose work involves developing activities that directly support student employability. This has involved organising site visits, running networking events, career coaching and supporting students with making
applications. A number of students have secured internships and employment as a result.

### 3.2 Transparent promotions processes and procedures

#### 3.2.1 Ensure promotions process is transparent and fair to all staff at all levels, including those that had a career break.

**1. Promotion**

Promotion from lecturer to senior lecturer/reader (Academic Grade 3 to 4 (AC3 to AC4)) and equivalent research roles, and promotions to Professor, are generally University-level processes. The ASPC (Academic Staff Promotions Committee) consider academic/research promotion cases annually. Promotions to Reader/Professor are considered three to four times a year by the Chair and Readership Sub-Committee. The DPS/Faculty process that occurs prior to these University committees is slightly different for the two processes.

Submissions to the ASPC begin each January when the Dean, with support from Department Administrators, asks HoDs to recommend staff for promotion. Previously, this stage in DPS has relied on individual self-identification, or DMT discussions led by CDSA appraisals (identified as being an area for improvement in our Practitioner submission) or via position on the salary scale.

To improve this, after discussions between the JAS team and the Department of Mathematics and Statistics, DPS introduced a new system to help the HoD identify promotion cases to submit to faculty by asking all members of the department to submit CVs for consideration [Practitioner action P35].

Under this new process, for the first time in 2015, all staff were invited to submit CVs to the HoD in January, and these were then read by the DMT. This allowed the HoD to identify staff who were ready for promotion (but who might not put themselves forward otherwise), to work with staff who may be ready to submit a promotion case in the next few years, and to identify shortcomings in the CVs of certain staff who might otherwise be ready for promotion. This allowed tailored, proactive support to be offered. With a new incoming HoD at the same time, this was also a valuable opportunity for her to learn more about her staff.

Only about 50% of staff submitted CVs – a lot lower than in a similar department (Mathematics and Statistics), which had been applying this process for several years. This was not unexpected, however, as it always takes time for new processes to bed-in and to become accepted. However, the submission of CVs was linked directly to the promotion process and it is believed (based on anecdotal feedback) that this discouraged some staff from submitting one.

Staff will be asked, annually, to submit CVs for consideration as part of the CDSA process [Champion Action C59].

Whether or not they had submitted a CV, all staff were considered for potential promotion at a special meeting of the DMT. Following this: (i) staff were encouraged by their line
Managers and HoD to submit a draft case to the DMT for consideration; (ii) if considered eligible they were recommended for promotion and a longer case submitted to FMT; (iii) if considered eligible by FMT, feedback was given to individuals on improving the case and (iv) a final case was sent to the Dean for approval and submission to the ASPC.

Professors and readership cases are handled slightly differently (i) individuals who are considering promotion are allocated a mentor; (ii) cases are then submitted directly to the Dean for feedback; (iii) if and when staff are considered eligible, a submission is made to the university sub-committee. A review panel for Professorial cases has recently been established by the new Science/MCT faculty, taking the place of individual feedback from the Dean.

The criteria against which each promotion is judged have been recently reviewed at university-level and new criteria were introduced for the 2015 round. The new procedures are intended to be more transparent, and have an increased focus on meeting specific criteria, rather than requiring a convincing narrative. Specific ‘teaching’, ‘research’, ‘research and teaching’ and ‘knowledge exchange’ routes from lecturer to senior lecturer and professor have been developed, and the ‘readership’ grade will eventually be discontinued. During the consultation process, the University SGEG, with input from one of the JAS co-chairs, provided feedback on the impact of the revised criteria on women, particularly in relation to career breaks, and a similar system to REF was included (See Principle 2.1.1). Currently, both old and new criteria are running in parallel, with the old criteria to be withdrawn in 2017.

Table 18 indicates that between 2010 and 2015, 32 cases have been considered by DPS DMT to meet the promotion criteria and have been progressed to FMT. Of these 32 cases, 8 of them were from women (25%). This is slightly less than the proportion of women in academic roles in DPS, which is ~33%.

Of the 32 cases submitted to FMT, 19 were progressed to the university committee, of which 6 were from women (~32%) – matching the proportion of women in academic roles in DPS (~33%). Of the 19 cases considered by the University, 15 were awarded, of which 4 were from women (27%).

Overall, of the 32 promotion cases supported by DPS management (24 men, 8 women) in the past five years, 15 cases were rewarded with promotion (~47% success rate) of which 11 were from men and 4 from women.

Table 18 Promotions within DPS since 2010

<table>
<thead>
<tr>
<th></th>
<th>2010-2013</th>
<th>2014</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Men</td>
<td>Women</td>
<td>Men</td>
</tr>
<tr>
<td>Cases progressed to Faculty</td>
<td>14</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Cases progressed to University committees</td>
<td>4</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>Promotions awarded</td>
<td>2</td>
<td>1</td>
<td>4</td>
</tr>
</tbody>
</table>

Overall, the data show that the proportion of promotions awarded, or progressed by FMT, matches the nominal departmental male/female ratio. However, a smaller than nominal
ratio of females are submitted from DPS DMT to FMT in the first place.

The reason for the low number of women progressed to FMT is unknown. However, following discussions within the JAS team, we have developed several possible suggestions:

1. The cohort of women eligible (e.g., 12 in 2014) includes 5 regional academics for whom promotion to Professor is known to be difficult (under the old criteria).
2. Women may not self-identify as promotion candidates, whereas men might.
3. Women may be less visible or self-promoting and therefore are overlooked by DMT.
4. Women may be less confident about their ability to meet the promotion criteria, whereas men may be prepared to prepare a case with gaps.
5. Women may undertake work that negatively impacts on their promotion prospects.
6. Appraisers/line managers may not discuss promotions during CDSA/regular meetings as a matter of course.

The first suggestion is, in our opinion, the most likely. The promotion of regional academics is a university-level problem that is hard to change, but they were consulted when the new promotions criteria were devised, and it is anticipated that their prospects to promotion to Professor will improve under the new system.

| DPS are also involved in a cross-Faculty project funded by eSTEeM to address the career progression of women in regional academic roles and this will provide data and feedback for consideration at faculty and university-level [Champion action C29]. |

Suggestions 2-4 are speculative hypotheses and hard to test, but it is hoped that our introduction of an annual CV-submission system, described above, will mitigate the situation if any of these are a cause.

Suggestions 5 and 6 are also speculative, but can perhaps be mitigated by effective workload planning and CDSA appraiser training.

Interestingly, the DPS survey revealed that 34% of staff agree that there are barriers to applying for promotion to more senior roles. Some of the barriers described included the lack of promotion structure (applicable to academic-related and support staff), lack of encouragement, lack of value for teaching activities, and time pressures. These responses are difficult to disentangle because a lack of encouragement may reflect the lack of broader opportunities for promotion for some categories of staff (e.g. academic-related). It is hoped that the new promotion criteria for academic staff will mitigate against negative perceptions for that staff group.

Currently, marginally more staff (~39%) do not understand the promotion criteria and processes than do (~34%). The new promotion criteria are more explicit and designed to be less ambiguous, however there is not yet any data to determine if the new scheme addresses these ambiguities.

In light of recent promotions announcements, we are pleased to note that there are now fewer women in DPS at junior academic levels – most having now been promoted to senior lecturer. In fact, there are now only two women at lecturer-level in DPS (both regional
2. Salary and Career-age data

An on-going aim of the department is to obtain and interrogate promotion data by candidate career age to establish if (i) women are promoted at a career age equivalent to that of men, and (ii) women are rewarded similarly to men at equivalent career age, or if there is a ‘pay-gap’ [Practitioner actions P36].

There is still work to do in this area. We have agreed upon a definition of career age: the number of full-time equivalent years since the first academic, research (PDRA or fellow) or higher education teaching fellow post, minus any years out for parental or other caring duties. However, we have not yet matched each staff member with a career age and have not yet determined how to ‘calculate’ this for those who have experienced variable part-time working or have changed roles (e.g. PDRA to Project Officer and vice versa).

We will ask staff to “self-certify” their career age at the next CDSA round, as this will then provide a baseline to assist in achieving the analysis intended in P36 [Champion action C60].

In the absence of this information, in our survey we asked whether staff believed women and men are paid an equal amount for doing the same work or work of equal value. 64% of staff agreed, with only 4 staff disagreeing, and there was no relationship to gender or job role.

3. Merit awards

The University also provides alternative staff rewards and acknowledgment of good work outside of promotion. These include Merit awards and Going the Extra Mile (GEM) awards. Both Merit and GEM awards come in the form of bonus payments, with the Merit awards being the greatest in value (up to £1500 compared to £125 for GEM). Neither, however, are available to staff above senior lecturer grade. Staff can also be awarded an additional increment on the pay scale, or a discretionary increment if already at the top of their pay scale.

Staff are nominated for Merit awards by their line managers, or they may self-nominate, with all staff considered at a special meeting of DMT to ensure equitable practice. Departmental recommendations are then passed to FMT for a decision to be made. Table 19 shows DPS merit nominations and awards since 2013.

<table>
<thead>
<tr>
<th>Table 19 Merit awards in DPS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nominations from DPS</td>
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<tr>
<td></td>
</tr>
<tr>
<td>2012/13</td>
</tr>
<tr>
<td>2013/14</td>
</tr>
<tr>
<td>2014/15</td>
</tr>
</tbody>
</table>

*The additional female was added as part of Dean’s list due to faculty level appointment. §The 3 women nominated but not awarded were awarded GEM awards instead (as was 1 man)
GEM awards have only existed since 2014 and are available *ad hoc* throughout the year. In 2014, 1 man was nominated and was successful. In 2015, so far 6 nominations have been made (4 women and 2 men); all have been successful and the 3 women and 1 man who did not receive Merit awards received GEM awards.

These indicate that women are fairly recognised and rewarded for their hard work, both within DPS and the Faculty.

### 3.2.2 Ensure all staff are aware of promotion criteria and process and the support available to them throughout the process

Principle 3.2.1 outlines the University’s promotions process and how DPS staff are supported through this. It should be noted that with the change in criteria, there have been several university-level briefing sessions offered to staff, which attracted several members of DPS (although no monitoring of numbers was taken).

The Head of Department is holding meetings with groups of staff to alert them to the new promotion criteria, and to help them to prepare well in advance of making a case.

### 3.2.3 Take steps to identify and encourage potential candidates for promotion.

The promotion process, and the identification of candidates, is outlined in Principle 3.2.1.

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**Principle 4**

**Departmental organisation, structure, management arrangements and culture that are open, inclusive and transparent and encourage the participation of all staff**

#### 4.1 Promote an inclusive culture

#### 4.1.1 Ensure departmental processes, procedures and practices are fully inclusive

1. **DPS meetings and communication**

   The DPS Department Management team (DMT) meets on a weekly basis, with the HoD also sitting on Faculty Management Team (FMT), which also meets weekly. Hence, faculty-level information is cascaded through to DPS staff efficiently.

   **In our Practitioner submission, the HoD committed to send a weekly message to staff regarding outcomes/decisions from Department and Faculty Management Team meetings [Practitioner action P16].**

   This was implemented and the new HoD is continuing this.

   Academic staff meetings were previously held quarterly, and ‘all staff’ meetings annually
however all meetings are now open to all staff and PhD students. In addition, open meetings with the HoD in attendance, are held every Monday, and staff can drop in at any time to discuss any issues.

In our last submission, we noted that not all categories of staff were present at relevant meetings, in particular PhD students were represented at DPS academic meetings, but PDRAs/Fellows and academic-related staff were not.

**DPS committed to inviting representatives of other staff groups to all academic meetings [Practitioner action P37] and a call was made for representatives of the PDRA and academic-related staff groups, with representatives appointed.**

Since the appointment of the new HoD, all staff meetings are open to all staff/PhD students, so formal representation of previously uninvited groups is no longer necessary. However, representation of students or staff who wish to remain anonymous can still be done via their representative (e.g. Hooke Soc representative for PhD students).

### 2. DPS core values

Staff are encouraged to work (and be appraised) within the University’s Valued Ways of Working (VWW) and/or the Leadership Competency frameworks (for senior staff), which define professional behaviours for staff in different job roles.

**In our Practitioner submission, we committed to determine a DPS ‘values and expectation’ statement linked to the university’s VWW framework [Practitioner action P27].**

The Departmental Administrator, working with the Science Faculty Administrator, developed a statement which was discussed by the JAS team. This has now been published on the DPS E&D website and intranet page.

**We will communicate the DPS Values and Expectations to all staff and postgraduate students, including a reminder that (i) any inappropriate behaviour should be reported, and (ii) line managers, 3rd party monitors and members of DMT are available for all staff and students to discuss any issues with colleagues’ behaviour [Champion action C61].**

The Values and Expectations statement is the welcome on the landing page on the DPS E&D web pages.

Even before this statement was published, in our 2015 survey, twice as many people agreed as disagreed that DPS had made clear its gender equality policies, so we are pleased at the level of awareness in the department.

Overall, the DPS survey revealed that the majority of staff feel that the culture of the department is supportive. Three out of four respondents to the DPS survey strongly agreed/agreed that staff and PhD students are treated on their merits irrespective of gender. However, there was a 50:50 split between staff/students who believed that the department values the full range of an individual’s skills and experience and those that did not. This perceived lack of value held by some staff showed no relationship to gender or job role,
However.

In our survey we asked whether staff/students believed that DPS was clear that unsupportive language/behaviour were unacceptable. 51% agreed, but 16% did not; the majority of these were PhD students. This is concerning, but unclear whether this reflects experience of poor behaviour or a direct answer to the question of DPS’ communication on the subject (i.e. an ambiguous question). In support of the latter conclusion, 65% of staff/students disagreed when asked if they had experienced a work related situation where they felt uncomfortable because of gender. Of course, this does mean that 22% have, and over twice as many women as men made this claim; this is cause for concern.

In order to find out from staff what issues they have met in order for us to prevent this in future, we will instigate a single-question survey with a free test answer asking staff and PhD students to describe any incidences of poor behaviour within DPS. To ensure anonymity, the survey analysis will be conducted by the Senior Faculty Administrator (external to DPS), and the results will be reported to DMT [Champion action C62].

The HoD will remind staff by email of the DPS values and expectations and of University’s policy on bullying and harassment, via the HoD weekly update, and advise staff that they can contact their line manager or DMT members confidentially to discuss issues of concern [C63].

In order to find out from staff what issues they have met in order for us to prevent this in future, we will instigate an anonymous reporting system

Thankfully, 76% of staff/students were confident that their line manager would effectively deal with any complaints of harassment, bullying or offensive behaviour; 13% disagreed but there was no trend associated with gender or job role.

It is hoped that having an explicit Values and Expectations statement will be of great help, as it will make all staff, including supervisors and line-managers, accountable for their behaviour.

We will monitor responses to similar questions in the next DPS survey to assess progress in this area [Champion action C64].

3. Management/leadership

All positions of responsibility are available for rotation, and are openly advertised. These carry an allocated workload tariff and staff are strongly encouraged to apply for these positions, regardless of gender. Some roles (Dean, Associate Deans, HoDs) also come with additional remunerations. Some (e.g. membership of SREC/SREMG/FMT/DMT) are associated with positions.

Table 20 shows the distribution of DPS staff into positions of responsibility in the Faculty, and the gender of those who occupy them currently.
Table 20 Distribution of positions of responsibility within the Science Faculty, and posts held by DPS staff in 2015. CEPSAR is Centre for Earth, Planetary, Space and Astronomical Research. *includes Director of Postgraduate Studies

<table>
<thead>
<tr>
<th>Role</th>
<th>Male</th>
<th>Female</th>
<th>DPS male</th>
<th>DPS female</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dean &amp; Director of Studies (n=1)</td>
<td>0</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Head of Departments (n=3)</td>
<td>1</td>
<td>2</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Heads of Disciplines (DPS only) (n=4)</td>
<td>-</td>
<td>-</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Deputy Heads of Department (n=4)</td>
<td>4</td>
<td>0</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Directors of Research (n=3)</td>
<td>3</td>
<td>0</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Postgraduate tutors (n=4)</td>
<td>3</td>
<td>1</td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Associate Deans (n=5)</td>
<td>4</td>
<td>1</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Deputy Associate Deans* (n=3)</td>
<td>0</td>
<td>3</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Associate Programme Directors (n=7)</td>
<td>3</td>
<td>4</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Faculty Student Support Team lead</td>
<td>0</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Academic Conduct officers (n=3)</td>
<td>1</td>
<td>2</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Science Research &amp; Enterprise Committee (n=11)</td>
<td>7</td>
<td>4</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Science Research and Enterprise Management Group (n = 11)</td>
<td>9</td>
<td>3</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Director eSTEeM (n=1)</td>
<td>1</td>
<td>1</td>
<td></td>
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</tbody>
</table>

In summary, of the 21 positions of responsibility occupied by DPS members, 3 are held by women (14%). This is below the proportion of women in the faculty as a whole (39%).

**In our Practitioner submission, we committed to monitor the appointment of staff to positions of responsibility to maintain the healthy representation of women from DPS who hold these positions and actively encourage women to apply for research-related responsibilities [Practitioner action P38].**

Since our Practitioner submission there have been two faculty positions advertised:
- Student Support Team Lead: 1 man/1 woman applied, 1 woman appointed
- Director of Postgraduate Studies: 2 men/1 woman applied, 1 woman appointed

Neither of these women appointed were from DPS, but we are pleased to see that JAS activities have raised faculty awareness of the importance of appointing more women into senior roles.

Since our Practitioner submission, there have been eight positions advertised within DPS:
- HoD: 1 man/1 woman applied, 1 woman appointed
- 2 Deputy HoDs: 5 men/2 women applied, 2 men appointed
- Research Director: 3 men applied, 1 man appointed
- 3 Postgraduate Tutors (two rounds): (i) 1 man/1 woman applied, both appointed, (ii) 1 man applied, 1 appointed
- Associate Programme Director: 1 man applied, appointed
- HoDi PSS: 2 men /1 woman applied, 1 man appointed
Department of Physical Sciences Juno Champion submission. Nov 2015.

- HoDi Physics (two rounds): (i) 1 man / 1 woman applied, woman appointed, (ii) 2 men/1 woman applied, 1 woman appointed.
- SST Physical Sciences Subteam lead: 1 man/1 woman provided statement of interest, 1 woman appointed.

The core DPS management team (which meets weekly) consists of two women and three men. The Extended Leadership Team (which meets monthly) consists of four women and 6 men. In both instances, the representation of women on the team is greater than the proportion of women in DPS (see Section 2.1).

In addition, we are very pleased to see a number of women applying for, and being appointed into, positions of responsibility across DPS and the wider faculty, including positions related to research.

**With further faculty restructuring, we are not clear what positions will be available in future, but DPS DMT will continue to encourage women to apply for all positions that become available [Champion action C65].**

53% of staff/students agreed that they knew ‘who does what’ in DPS; 33% said that they do not. Those that do not were predominantly PhD students and academic-related staff, who may have fewer opportunities to be involved in broader university life. Therefore there is some work to be done on improving communication and engagement, particularly through the coming restructuring period. The recent changes to DPS communication (open meetings/regular email updates/website implementation) should result in improvements and this will be monitored in future DPS surveys.

In addition, the department is planning an event in which all staff briefly introduce their research in 3 minutes, with PhD students and PDRAs the main target audience.

**4.1.2 Gender awareness is included in the training for all staff and demonstrators**

More details about our gender awareness and equality and diversity training is provided in Principle 2.1.2.

**4.1.3 Promote inclusive social activities and other opportunities for mutual support and interaction**

1. **Social activities**

DPS social activities are organised by Hooke Soc. All DPS staff and PhD students are members of Hooke Soc, but organisation of events is led by a committee of PhD students (three women, one man). Committee membership is voluntary.

We invited a Hooke Soc representative to join the JAS team, and to minimise impact on any one student’s studies, the committee rotate attendance at JAS meetings [Practitioner action P39].
This year’s social events have included a Christmas meal and a summer BBQ that took place during working hours (41% female attendance at both – above DPS staffing base). A family-friendly pumpkin-carving event was held in October (50:50 M:F), and cinema trips were organized to see films rated no higher than 12A, to which families with children were welcome. Attendance at these events, however, was low.

However, in the DPS survey, 77% of staff/students of both sexes agreed that work-related social activities in DPS are likely to be welcoming to both women and men.

**Hooke Soc have kept informal attendance records for each event, tracking numbers of staff and student attendees and the gender split for the different events and have ensured that there is adequate notice for all family-friendly events [Practitioner actions P40].**

From Hooke Soc’s records it is evident that PhD students and academic staff dominate attendance at social events, but the proportion of PDRAs is well below their representation in the staffing base.

PDRAs, being a smaller population of staff, may prefer to socialise within their own group. It is also possible that, unlike PhD students, PDRAs do not arrive as a ‘cohort’, they may have a less cohesive social group than PhD students and have other social structures that take precedence over department activities. The fact that some PDRAs are part of student supervision teams may encourage them to seek a measure of distance with the student population.

**In order to counteract this under-representation, attendance at past events will be considered by Hooke Soc, to identify which demonstrate wide appeal (e.g. murder mystery event). This will inform future planning to encourage more PDRAs to attend [Champion action C66].**

**Communication of upcoming events will continue to emphasise that all are welcome, including partners and children, and targeted invitations can be sent via a PDRA email list [Champion action C67].**

**In the 2015 call for Hooke Soc committee membership, a position for PDRA representative will be created, with the role designed as a liaison between the larger student population and the PDRAs to encourage PDRA attendance at social events [Champion action C68].**

DPS continues to have good representation at inter-university sports competitions e.g. football and cricket, although women’s representation is minimal. However, DPS annually enters several teams into the University relay-race, and mixed gender teams (and an ‘older runners’ team) are entered each year.

Other informal events are ‘Friday drinks’, preceded by ‘Friday donuts’ for those that are not able, or do not wish to attend Friday drinks. ‘Friday beers’ was re-branded by Hooke Soc to ‘Friday drinks’ to encourage a more diverse attendance.
2. Networking opportunities

Attendance (and presentation) at external academic meetings is strongly encouraged and PhD students, in particular, are actively encouraged to seek bursaries for such events for both networking and career development opportunities (e.g. proposal writing and budget management).

In our DPS survey, 59% of staff and students agreed that they are encouraged and given opportunities to represent DPS externally or internally. More PhD students agreed with this statement than disagreed. Those staff that disagreed (15%) were academic-related and support staff, for which such opportunities are minimal.

60% of respondents also agreed that they were provided with networking opportunities by DPS; 33% said they were not. Although it was anticipated that the negative respondents would be from academic-related/support staff, for the same reason given above, more academic staff claimed to not be provided with networking opportunities. This was surprising for a number of reasons.

**University Athena SWAN networking events are advertised to women in DPS via the University’s research office who champion Athena SWAN activities [Practitioner action P41].**

The responses might also reflect the fact that networking is perceived to be a skill that is learned earlier in an academic career, and university-level training in how to network is offered for early-career staff.

Despite these responses, no staff identified networking opportunities as something they felt DPS needed to provide.

Since our Practitioner submission, the PDRAs in DPS have self-organised a mutual support network, a discussion forum where they can meet, get to know each other better, and discuss career plans. The group extends to final year PhD students. They meet monthly over lunch for an hour and invite guests to talk informally to them about a particular topic decided by the group, e.g. transition to academic positions, opportunities in industry and writing fellowship applications. Meetings have proved popular (>20 attendees) with women outnumbering men consistently, although no formal monitoring has been conducted. To help this group to be sustainable in the long term, it is officially recognised by, and has the full backing of, the HoD and DMT, including financial support when appropriate e.g. for occasional lunches/breakfasts.

4.1.4 Use positive, inclusive images in both internal and external communications

The University’s publicity materials, including its website, reflect its philosophy of openness and equality. Where possible, images of our own students, staff and alumni are used, rather than library shots, and great care is taken to represent the diversity of the OU community. DPS does not produce its own prospectus but during the preparation of our Practitioner
submission, we identified that the DPS web pages showed very few images of any people (men or women!), unless associated with news items, which may give an unwelcome feel to the department.

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<thead>
<tr>
<th>We committed to ensuring that the website would include active images of DPS staff members on the DPS web pages, where appropriate, and in addition to portrait-style photos on staff profiles [Practitioner action P26].</th>
</tr>
</thead>
</table>

Since then, a push has been made towards building a community-feel to the DPS website. All areas research disciplines now have photos of their staff, the home page has active images of staff working in a variety of environments (including women in laboratories), and ALs are recognised with an image on the curriculum page. All staff are encouraged to ensure their profile pages include an image of themselves.

<table>
<thead>
<tr>
<th>DPS will ensure that additional changes are made, e.g. ensuring all research areas have photographs of staff, PhD vacancy pages include images, and research pages shows active images of women and men [Champion action C69].</th>
</tr>
</thead>
</table>

The DPS staff photo board at the entrance to the department has been the subject of much debate because a) some staff were reluctant to have their photos taken, and b) it was organised in a hierarchical fashion. For this reason, it remained largely incomplete and out of date.

<table>
<thead>
<tr>
<th>In our Practitioner submission we aimed to address this [Practitioner action P42], and the photo board has been re-arranged alphabetically and all new staff now have their photos taken on arrival to ensure inclusion.</th>
</tr>
</thead>
</table>

Photos of new staff (including students and interns) are also now sent around the department via email on their first day, to welcome them and to introduce them to existing department members. This message outlines who they are, what their role is and where they will be located.

<table>
<thead>
<tr>
<th>In our Practitioner submission we committed to devising a ‘quick find’ guide detailing the location of staff [Practitioner action P43]. A laminated ‘map’ of the Robert Hooke building illustrating who sits where is already in production and will be posted on the wall in the admin office.</th>
</tr>
</thead>
</table>

Hooke Soc currently lacks a web presence, despite their contribution to DPS, meaning there is no strong demonstration of the departmental culture.

<table>
<thead>
<tr>
<th>In our Practitioner submission Hooke Soc committed to investigate possibility of a web presence on the DPS website [Practitioner action P44]</th>
</tr>
</thead>
</table>

With the changes to the Hooke Soc committee and the departmental website/webmaster, this has not yet been possible, but we will carry forward this action into our Champion action plan [Champion action C70].
4.1.5 Encourage and support female seminar speakers

There are three main types of seminar: CESPAR/DPS seminars, IoP lectures (evening events) and journal club.

At the time of our Practitioner submission there was no central DPS system for recording and monitoring all seminar speakers by gender. This has now been achieved, and the seminar monitoring is conducted by the DPS admin team [Practitioner action P45].

1. CEPSAR/DPS seminars

The number of female speakers has increased steadily and in the 2014/15 academic year 25% of speakers were women (in our Practitioner submission this was 20%). We are pleased to see an improvement here, and pleased that we are able to represent women well above the proportion in UK HEI physics (17.5%, HESA 2012/13); however, we are not yet at the proportion of women we see in our staff base (33%).

Our project secretary will continue to monitor the gender balance of seminar speakers within DPS, and work with the seminar organisers to ensure the proportion of women invited to speak increases further [Champion action C71].

DPS are also actively encouraging all staff members to contribute seminars within the programme, and the seminar organisers will ensure the gender balance of volunteers is representative of the staff base [Champion action C72].

2. IoP seminar series

The percentage of female speakers has gradually increased, despite the number of speakers decreasing. By the 2014/15 academic year, two out of five of the speakers were women, consistent with our own staffing base and above UK benchmarking data for women in physics (17.5%, HESA 2012/13).

We are very pleased we have been able to influence this series as it is open to the general public.

Our project secretary will continue to monitor this to ensure we maintain this level of representation [Champion action C73].

3. Journal club

Journal club is a weekly, lunchtime event where current or topical publications are discussed. All staff, both male and female, are encouraged to give presentations at the weekly journal club; PDRAs are particularly encouraged to present and PhDs are expected to. Hence, the proportions of women delivering journal club talks should match, broadly, with the
proportion of women in DPS.

In the 2014/15 academic year, the proportion of women in DPS delivering journal club presentations was 40%, exceeding the proportion of women in the department (overall and for staff/students). This is a pleasing statistic, though we will continue to monitor to ensure that there is no negative impact.

4.2 Transparent workload allocation model

4.2.1 Recognise the full range of types of contributions and departmental role, including administrative, welfare and outreach activities.

A comprehensive Academic Workload Management (AWM) system is used by all academic and research staff across the University. Staff allocate their duties in consultation with their line manager (following CDSA) for the upcoming academic year, taking into account individual requirements and institutional strategy. Workload plans are organic and can be updated as activities change, with approval from line managers.

Every task carries a tariff (including some outreach, work on JUNO and Athena SWAN, service to external bodies), which is set at faculty or university level, or by discussion with line managers. Each member of academic staff is expected to undertake approximately 100 days of teaching (unless they have research funding that allows them to be “bought out” of some/all of it) and 79 days of research within their 217 working days. These norms have been determined at university-level to allow adequate balance of research time and other activities within an individual’s workload. These norms do not apply to regional academics who also undertake regional duties (that can include teaching) that constitute up to 60% of their allocated time. The remaining 40% is for central work, which can also include teaching study leave and other tasks and they have 22 days of study leave allocated per year, which can be used for research.

At the end of each academic year, staff report their “actuals” from the previous year. From this, approximate information about teaching/research split can be identified. Prior to restructuring in 2012, the old Physics & Astronomy department had a workload split between teaching and research for central academics that was approximately 50/50 for men, but 75/25 for women, biased towards more teaching. In 2013, the recorded workloads at the end of the first full year of DPS (12/13 academic year) were 36/64 for men and 50/50 for women. This reflected an influx of staff (including a single female academic) from the former PSSRI (a research institute). In addition, six female members of staff had departmental/faculty positions of responsibility (Table 20, Principle 4.1.1) that impacted on the teaching/research balance.

In our Practitioner submission, we committed to further investigate workload allocations by job role, career stage, and gender and ensure teaching/research allocations are balanced equitably for women and men [Practitioner action P46].

In 2015, workload allocation and actuals data were requested from faculty and analysed.
1. **Workload reported (‘actuals’) by gender for DPS**

Three years of “actuals” data were provided: 2011/12, 2012/13, and 2013/14. 2014/15 planning data were also provided. The workload data were split by activity into research, teaching, administration/management, and knowledge exchange/outreach. The decision to use these categories was made by a sub-group of SGEG, involving one of the co-chairs of the JAS committee, on the basis of preliminary analysis of workload planning data for our Practitioner submission shared with SGEG. These categories were chosen as they mapped directly onto the strands within the new promotions criteria (see Principle 2.2.1).

The data were provided in terms of days allocated to each activity, which made statistical analysis challenging, as it could not be easily ascertained whether, for example, 80 days of teaching time was allocated to a single member of staff, or to 8 members with 10 days each. This means that it is nearly impossible to provide statistically significant estimates for these data, although in some cases knowledge of the staff base means that it can easily be seen that the data refer to only a single staff member in a certain role.

The departmental data were further broken down by declared gender (only male and female; no staff declared that they were neutral or mixed gender), role (central academic, regional academic, or researcher) and discipline (Physics; Astronomy; Planetary and Space Science; Space Instrumentation).

Since the department has only 6 regional academics, data describing their workloads have very low statistical significance. Also, not every discipline contains regional academics.

Similarly, while there are plenty of data for staff in the researcher role staff to analyse, nearly all research staff have (perhaps unsurprisingly) workload plans that consist nearly entirely (>95%) of “research”, with no gender or discipline variations. Hence, most of the data presented here refer to central academic staff. Finally, the Space Instrumentation discipline data are not included, as they are a small group with only 1 male central academic (at the time of the data analysis).

In future, we will not be able to obtain workload data by discipline as the categories have been removed from the workload system because of DPS restructuring in 2015.

**Presented in Table 21** are the reported percentages of time spent by DPS central academic staff on different activities. For each year, these data were obtained by summing all the days for a given activity type for a given gender across the three disciplines analysed and dividing that result by the total number of days declared for all activities for that gender across those three disciplines.

<table>
<thead>
<tr>
<th>Year</th>
<th>Research</th>
<th>Teaching</th>
<th>Administration/Management</th>
<th>Knowledge Exchange/Outreach</th>
</tr>
</thead>
<tbody>
<tr>
<td>2011/12</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2012/13</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2013/14</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Table 21**

Department of Physical Sciences Juno Champion submission. Nov 2015.
Table 21 Proportion of time reported by central academics for different activities: whole of DPS. Note: total DPS central academic days have a M/F split of ~ 7:2 (35% F)

<table>
<thead>
<tr>
<th></th>
<th>2011-2012</th>
<th>2012-2013</th>
<th>2013-2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teaching</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>36.5%</td>
<td>29.4%</td>
<td>26.2%</td>
</tr>
<tr>
<td>F</td>
<td>42.0%</td>
<td>37.2%</td>
<td>36.3%</td>
</tr>
<tr>
<td>Research</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>45.8%</td>
<td>52.6%</td>
<td>51.7%</td>
</tr>
<tr>
<td>F</td>
<td>41.3%</td>
<td>42.5%</td>
<td>39.3%</td>
</tr>
<tr>
<td>Knowledge exchange</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>6.5%</td>
<td>7.6%</td>
<td>6.1%</td>
</tr>
<tr>
<td>F</td>
<td>2.7%</td>
<td>5.4%</td>
<td>4.4%</td>
</tr>
<tr>
<td>Admin</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>11.2%</td>
<td>10.4%</td>
<td>16.0%</td>
</tr>
<tr>
<td>F</td>
<td>14.1%</td>
<td>14.9%</td>
<td>20.1%</td>
</tr>
</tbody>
</table>

At the departmental level, the following points arise:

- Workloads are dominated by research and teaching (>75-80%) for both men and women, but proportions of non-teaching/non-research activity has risen by ~ 5% since 11-12.
- Women report spending more time on teaching than men (36-42% cf. 26-36%), however this has declined for both genders since 2011/12.
- Men report spending more time on research than women (46-52% cf. 39-43%), and this has increased for men since 2011/12 but remained static for women.
- Women report spending more time on admin than men (14-20% cf. 10-16%), although the differences are small (<5%). Time spent on admin has increased for both sexes since 2011/12 by similar amounts.
- Men report spending more time on Knowledge Exchange than women, but the time allocation for these activities has remained static since 2011/12 and the differences are small (<5%).

The differences between the time spent on given activities by men and women are within 10% in nearly all cases. A more detailed analysis (and a new set of data that enables the number of staff recorded, rather than number of days) would be required to understand if these mean data are statistically significant.

2. Workload reported (‘actuals’) by discipline

The data have also been broken down by discipline, in order to search for cultural differences between the major subject areas within the department (Table 22). As previously mentioned, Space Instrumentation is not included as there was only 1 central academic member of staff at the time of the analysis.

Table 22 Comparison between workload reported by central academics by disciplines (M+F added together)
Astronomy staff consistently report spending a higher proportion of their time on knowledge exchange (10-12%) than any other discipline.

Physics staff report spending the highest proportion of time on teaching (38-56%), PSS the least (20-28%).

PSS staff report spending the highest proportion of time on research (54-58%), Physics the least (33-40%).

All disciplines report spending about 10-20% of their time on admin.

Disparities between teaching and research lessened across the reporting period in Physics and Astronomy. Astronomy staff reported that they spent more time on teaching and less on research as the period progressed; Physics staff report that they spent less of their time teaching and more on research as the period progresses.

In PSS the teaching/research divide increased, PSS staff report spending a higher proportion of their time on research at the end of the period, and a smaller proportion of their time on teaching.

### 3. Workload planning data

The planning data (Table 23) represent work allocated by agreement between departmental management and individual academics. In some ways, these data provide more insight into possible gender differences, as they reflect the workload days allocated to academic staff to do specific jobs, as opposed to staff perceptions of what they did in the preceding year. Data for 2014-2015 were available at the time of the analysis and include the Space Instrumentation (SI) discipline.

<table>
<thead>
<tr>
<th>Activity type</th>
<th>11-12</th>
<th>12-13</th>
<th>13-14</th>
</tr>
</thead>
<tbody>
<tr>
<td>Astrot</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>T</td>
<td>26.4%</td>
<td>25.8%</td>
<td>32.0%</td>
</tr>
<tr>
<td>R</td>
<td>48.3%</td>
<td>49.6%</td>
<td>43.4%</td>
</tr>
<tr>
<td>KE</td>
<td>11.5%</td>
<td>10.0%</td>
<td>11.0%</td>
</tr>
<tr>
<td>Admin</td>
<td>13.8%</td>
<td>14.5%</td>
<td>13.7%</td>
</tr>
<tr>
<td>Physics</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>T</td>
<td>55.5%</td>
<td>45.8%</td>
<td>37.1%</td>
</tr>
<tr>
<td>R</td>
<td>32.6%</td>
<td>40.1%</td>
<td>40.3%</td>
</tr>
<tr>
<td>KE</td>
<td>3.6%</td>
<td>5.6%</td>
<td>3.1%</td>
</tr>
<tr>
<td>Admin</td>
<td>8.3%</td>
<td>8.5%</td>
<td>19.5%</td>
</tr>
<tr>
<td>Planetary and Space Sciences</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>T</td>
<td>28.0%</td>
<td>22.8%</td>
<td>20.0%</td>
</tr>
<tr>
<td>R</td>
<td>53.7%</td>
<td>58.4%</td>
<td>58.2%</td>
</tr>
<tr>
<td>KE</td>
<td>4.3%</td>
<td>6.3%</td>
<td>4.6%</td>
</tr>
<tr>
<td>Admin</td>
<td>14.0%</td>
<td>12.5%</td>
<td>17.2%</td>
</tr>
</tbody>
</table>
Table 23 Proportion of time proposed to be spent by central academics on different activities 2014/15 for all four disciplines with 2013/14 actuals for comparison. Caveat: SI only have two CA staff members (both male). None = no members of staff in this category

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Teaching M</td>
<td>32.4%</td>
<td>38.8%</td>
<td>34.3%</td>
<td>53.1%</td>
<td>17.5%</td>
<td>18.0%</td>
</tr>
<tr>
<td>Teaching F</td>
<td>30.6%</td>
<td>27.5%</td>
<td>41.3%</td>
<td>48.7%</td>
<td>31.4%</td>
<td>40.0%</td>
</tr>
<tr>
<td>None</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Research M</td>
<td>40.3%</td>
<td>32.2%</td>
<td>43.3%</td>
<td>32.8%</td>
<td>63.5%</td>
<td>60.9%</td>
</tr>
<tr>
<td>Research F</td>
<td>51.8%</td>
<td>62.4%</td>
<td>36.0%</td>
<td>37.9%</td>
<td>34.5%</td>
<td>23.7%</td>
</tr>
<tr>
<td>KE M</td>
<td>12.9%</td>
<td>15.1%</td>
<td>1.9%</td>
<td>2.1%</td>
<td>5.0%</td>
<td>7.9%</td>
</tr>
<tr>
<td>KE F</td>
<td>5.5%</td>
<td>7.0%</td>
<td>4.8%</td>
<td>5.2%</td>
<td>2.7%</td>
<td>4.1%</td>
</tr>
<tr>
<td>Admin M</td>
<td>14.3%</td>
<td>13.9%</td>
<td>20.5%</td>
<td>11.9%</td>
<td>14.0%</td>
<td>13.2%</td>
</tr>
<tr>
<td>Admin F</td>
<td>12.1%</td>
<td>3.1%</td>
<td>18.0%</td>
<td>8.2%</td>
<td>31.4%</td>
<td>32.2%</td>
</tr>
</tbody>
</table>

- The planning data generally continue the trends shown in the actuals, with PSS staff planning to do less teaching, but more research. The situation was reversed for Physics staff.
- Women in Astronomy planned to spend significantly more of their time doing research than teaching in 2014/15, and men in Astronomy planned to spend more of their time teaching.
- Women in Astronomy planned to spend nearly twice as much time doing research than men in Astronomy, but men in Astronomy planned to allocate a much higher amount of their time to admin and knowledge exchange than women in Astronomy.
- Both men and women in Physics planned to do more teaching than research, with women planning to do slightly more research and less teaching than men. Knowledge exchange and admin plans are broadly similar for men and women in Physics.
- Men in PSS planned to spend much more of their time doing research than teaching, with the allocation reversed for women in PSS. Women in PSS planned to spend ~30% of their time on admin tasks, however, compared to only ~13% for PSS men. This reflects the fact that the HoD at this time was a woman in PSS, and the only other woman in PSS was a Deputy Associate Dean.
- Across the disciplines, Physics once again allocates a higher proportion of time to teaching than any other discipline, with the lowest allocation of teaching being Space Instrumentation (who plan to do no teaching, according to workload planning data).
- Women in Astronomy and men in PSS expected to spend a high proportion of their time on
research (> 60% in both cases) but Spacecraft Instrumentation staff (only one man) have the highest research expectations of all, planning to spend nearly 80% of their time on research.

- In general, DPS central academic staff planned to do more teaching in 2014/15 than was reported in the 2013/14 actuals, except women in Astronomy and Space Instrumentation staff.

- Nearly all DPS central academics planned to do less research in 2014/15 than they reported doing in 2013/14, with the exceptions being women in Astronomy and Physics and the one male academic in Space Instrumentation.

4. Conclusions

The “whole department” data (Table 21) appear to show that female central academic staff consistently reported spending ~ 5-10% more time on teaching than male academic staff, and ~ 5-10% less time on research. Women report doing slightly less knowledge exchange and slightly more admin.

Table 22 shows that Physics staff do more teaching than the other two disciplines. Physics also has the most equal share between men and women in terms of research/teaching split in the 2013/14 actuals and 2014/15 planning data (Table 22), and also are the discipline with the highest proportion of women.

We are encouraged by the planning data (Table 22) show improving trends in research/teaching split. Women in Astronomy and Physics allocated similar (or greater) amounts of time to research compared to men in those disciplines, and men in Physics and Astronomy spent similar amounts of time on teaching as women. Women in PSS, in contrast, consistently allocate more time to teaching and less time to research than men in PSS (although caveats apply because there are only 2 women in PSS including the former HoD).

While the central academic data look robust on the surface, due to being reported as “days” and hence involving large numbers, they suffer from the problem that they represent only small numbers of actual people. Hence, it is difficult to draw solid conclusions about any differences when the data could be skewed by the personal preferences (for example, a preference to concentrate on teaching) or management responsibilities (for example, as HoD) of a single person.

It should also be noted that the number of days reported for research includes externally funded research. These days reflect the research strengths of individuals and disciplines, and are not allocated internally.

Following on from this point, it is not yet known whether staff with large teaching allocations are choosing to do this, or whether this is more because they have not been allocated research time, or have not won external grants. Also, do they feel they are being allowed to bid for external funds if they want to? Understanding such issues requires a qualitative investigation, as the information cannot be obtained from the workload planning data.
We will include a question on this issue in the next DPS survey [Champion action C74].

The most important issue that has arisen in this research is that it appears that women tend to do about 10% more teaching than research compared to men. This has been communicated to departmental management, and will be kept in mind when workload planning is being finalised in future. Similarly, staff with workload planning responsibilities have been asked to ensure that consideration is given to all staff when asking for justifiable internally-funded research time, applying the norms consistently for all staff.

4.2.2 Ensures all staff are aware of the criteria used to develop the model and that the allocation is transparent

All academic/research staff across the University use the same Academic Workload Management System. Members of staff are emailed instructions on how to access this system, which is hosted online and accessible via their university log-in.

The HoD can access staff workload planning records for approval, and staff are notified when the workload planning round has been completed. Deans are obliged to report to the University that their staff have complied with this.

Of those staff that gave a non-neutral response on our survey, 59% agreed that work is allocated on a clear and fair basis; however, the majority response was neutral and there was no difference between responses from men and women.

Indeed, 68% of respondents agreed that work was allocated irrespective of gender. Only three people disagreed, and all cited higher perceived teaching loads for women as the reason. There is evidence for this in our workload planning data, but as discussed above, the explanation is, as yet, unclear.

Principle 5

Flexible approaches and provisions that enable individuals, at all career and life stages, to optimise their contribution to their department, institution and to SET

5.1 Support and promote flexible working practices

5.1.1 Clear support from the HoD for flexible and part-time working

The OU is a distance learning institution that makes extensive use of e-learning and remote communication and conferencing facilities. This embeds flexible working into the University’s ethos. Academic and research staff also have no defined working hours, allowing them to work off campus as they prefer. Regional academics and those working off campus regularly attend meetings and training (Principle 2.1.2) by Skype or Lync call. However, flexibility is constrained by role and so lab-based staff, administrative staff and
some others are not able to be flexible in terms of their location, but can be flexible in the hours that they work.

To show its commitment to flexible working, in 2014, the University launched its Agile Working Policy, in which:

- A change to number of hours worked, time and place of work, and the processes/technologies/environments used can be formally requested.
- All staff (regardless of time served) can request a change to their T&Cs in order to work flexibly
- Flexibility can be a temporary or permanent arrangement, balancing personal and operational needs
- One off, or ad-hoc agile working does not need to be formalised, and is at the discretion of line managers.

Application of the Agile Working Policy is outlined in Principle 5.1.2.

Within DPS, there is no register of when staff are on campus or not, and working from home is not considered a privilege or exception. There is strong support from the HoD, who also works flexibly and is enthusiastic about allowing others to do so.

Because of the prevalence of flexible working and the nature of the OU’s student base, the University does not operate formal office hours. However, in DPS, all departmental meetings are scheduled between 10am and 4pm and staff can attend using telephone/conferencing facilities. It is clear from our staff survey that 63% of staff are aware of this logistical arrangement. However, 54% of staff believed that those who were unable to work long hours were disadvantaged. Although the number of respondents to this question was low and therefore no statistical significance can be attributed to results, there is an indication that more women believe this than do not.

We will use the next DPS staff survey to investigate perceptions of ‘long hours culture’ within DPS [Champion action C75].

53% of staff responded that line managers were supportive of flexible working requests and a further 45% believed flexible working requests to be not applicable, a possible indicator that formal flexible working agreements are, essentially, unnecessary for many staff.

5.1.2 Consistently applied policy on part-time and flexible working

In our practitioner submission, we said that flexible working requests would be recorded and monitored by gender by the faculty [Practitioner action P48].

Formal requests for flexible working have only been recorded by the University’s HR Unit since 2012 and flexible working is so embedded into the institution that the numbers of formal requests are low even at University-level. In DPS, there have been no formal requests for flexible or agile working in the past few years, most probably because flexibility is so much a part of culture of the department. However, it may also be because of a lack of
Awareness of the policy, despite email communications and a launch on the University's new site. There is now a link to the policy and guidance documents on our DPS E&D intranet.

Change in circumstances (part- to full-time or vice versa) are not part of the agile working framework, and this information is not recorded by HR. There have been no change of circumstances requests made in the reporting period in DPS. However, two part-time members of staff made successful requests for their hours be increased; one made two requests for a staged return to almost full-time. There have been ten requests for change of circumstances (5 men, 5 women) in the wider faculty from academic/research staff, which included requests for reduced or increased hours. There were no trends with gender. All requests were approved.

5.1.3 Promote the benefits of flexible working for both men and women, particularly those with caring responsibilities.

The University’s flexible working practices are outlined in Principle 5.1.1. The benefits of flexible working are demonstrated to the whole department by the HoD and other senior staff who work flexibly.

5.1.4 Explicit support for those returning from career breaks or maternity leave.

In our Practitioner submission, we committed to:

- Investigate the use and effectiveness of ‘Keeping in Touch’ (KIT days)
- Lobby the faculty to formalise a norm for a reduced teaching load for returners from maternity leave.
- Investigate how cover for maternity/adoptive leave works in practice.
- Monitor the return to work process including: encouraging line managers to complete and submit return-to-work interview paperwork, and ensure DPS returners are allocated a mentor.

[Practitioner action P49].

The University, as part of the university-wide Athena SWAN action plan, have undertaken qualitative research into maternity (and other parental) leave at the OU and the outcomes have been shared with the JAS team (although not disaggregated for DPS staff). For this reason, we have not pursued additional research in this area.

This research showed that 67% of participants knew that KIT days existed, and 40% had used KIT days whilst on leave. Just six respondents had used their full entitlement of ten KIT days, the majority had used between one and five. Of those who had used KIT days 89.6% had found them helpful for updating knowledge, building confidence, reconnecting with work and preparing to leave their child in day care. 33% of respondents were not aware that KIT days existed and some did not realise that they were salaried.

The research recommends increasing staff awareness of KIT days via a dedicated parental
Until this is implemented, with advice from the Faculty staffing team, we will gather information about parental leave policies and link these via the DPS E&D intranet [Champion action C76].

Since our Practitioner submission there have been no instances of any career breaks or maternity leave in DPS. The one maternity leaver reported in our previous submission has left the department having successfully gained a permanent academic post elsewhere in the University. The department’s enthusiastic support of her part-time working request post-maternity enabled her to maintain her research profile and helped her to win the permanent position.

The research recommends the University should raise awareness with managers of the organisational and equality reasons for providing maternity (and other parental leave) cover wherever possible and practical and that they should become aware of the financial support for cover supplied centrally by the University.

However, the University’s research revealed that some academic staff felt that there was no one available to cover for them during their maternity leave because of the specialist knowledge or skills needed to fulfil their teaching or research role, and a number of research-active staff emphasised how difficult it was to ‘let go’ of their research for a period of time. Here, the research recommends helping leavers get back up to speed through a sabbatical or a small grant to cover research assistance, or conference expenses.

One paternity leaver from DPS commented:

“…from an admin perspective [paternity leave] was extremely easy to take, I just filled out the form and it was all sorted. The difficult part was taking it in terms of losing time/workload. There wasn’t any specific cover or help put in place by senior management, but equally I did not ask for it. I managed the work by asking members of my team to cover, but since this was only 10 days this was not an issue really.”

DPS does not have the autonomy to implement some of these activities (in particular funding cover not covered by external grant income). However, requests to a limited DPS budget for non-grant funded travel are considered monthly by DMT.

Returners from parental leave of approximately 6 months or more will be prioritised for consideration for conference costs, including a contribution to childcare/other caring costs for the period of the conference [Champion action C77].

In addition, DPS HoD and line manager would work with the returner to identify which areas of their workload they wished to focus on when they return (since some staff may favour non-research activities) and ensure their workload was commensurate with their needs [Champion action C78].

Further, returners will be offered a mentor on their return [Champion action C79].
74% of participants felt that their parental leave had made no impact on their teaching, although only 54% felt it made no impact on their research. However, more participants felt parental leave had a positive impact on their research than on their teaching!

5.1.5 Encourage take up of paternity and other caring leave

New fathers are strongly encouraged to take their allotted paternity leave. Since 2013, one male professor, two male lecturers and one researcher have taken paternity leave.

In light of national changes, since April 2015, the University have a Shared Parental Leave and Shared Parental Pay Policy. Thus far, there have been no requests for this in DPS, although notification of the policy change and links to guidance documents were circulated to all staff. There have not been any formal requests for adoption or other caring leave in DPS in the last five years.

All guidance and policy documents relating to parental and other caring leave are available via the University’s HR website. However, the University research indicated that there is confusion over, in particular, the implementation of shared parental leave.
Appendix A – Why do women do less well on some of our physics modules?
This presentation was given at VICE/PHEC in August 2015 relating to project work investigating level 2 achievements.

Why do women do less well on some of our physics modules?

Sally Jordan, Pam Budd, Niusa Marigheto, Victoria Pearson, Richard Jordan, Jimena Gorifnkel
VICE/PHEC 20th August 2015

The Open University

- Founded in 1969.
- Supported distance learning.
- 200 000 students, mostly studying part-time.
- Most undergraduate qualifications are completely open entry, so students have a wide range of previous qualifications.
- Normal age range from 18 to ??
- 20 000 of our students have declared a disability of some sort.
- 13 000 of our students live outside the UK.
- Students study on modules (mostly 30- and 60-credit) which are combined together into qualifications.
Background to this work

- S207 (*The Physical World*) is a 60-credit OU level 2 (FHEQ level 5) module (to be replaced by S217 from autumn 2015).

- Men have been significantly and consistently more likely to complete S207 than women.
- Of those who complete, men have also been more likely to pass.

- The difference in outcomes was larger in 2013-14.
- The effect is not present in our level 1 modules or in any other Science level 2 modules except for S282 (*Astronomy*), where women also do less well but the difference is not so stark.
- Women do slightly better on our level 3 physical science modules.

So what’s causing the attainment gap?

Initial hypotheses:

- It has something to do with the type of assessment we are using.
- There are other demographic differences (e.g. previous educational qualifications) between our male and female students.
- There are other differences between men and women e.g. in the amount of time they have available for study.
- It has something to do with role models and/or the nature of the support being offered.
- It has something more fundamental to do with the way we are teaching physics.
- On average, women and men handle certain physical concepts and skills of physics in a different way.
Results of data analysis

Concentrating on the 2013-14 presentation
N (male) = 455
N (female) = 157

Different outcomes for male and female students
When do students stop submitting assignments?

Performance on different parts of the exam

Part A is multiple-choice questions; Part B is short-answer questions; Part C is longer questions (with choice)
Performance on different questions in the exam
For Part C (Choice of 3 out of 7 long questions)

Choice of different questions in the exam
For Part C (Choice of 3 out of 7 long questions)
Performance on iCMAs (interactive computer-marked assignments)

Note that a wide range of questions are represented, but there is no obvious correlation between male/female performance and question type.

Demographics

- There are no obvious differences between the distribution of other demographic factors (e.g. age, previous educational qualifications etc.) for men and women.
- However, there is some indication that women with other characteristics, in particular
  - having less than two A levels
  - not having English as a first language may be particularly likely to withdraw.
- There is also some evidence that women appreciate different aspects of student support/tuition than men.
- Although the proportion of students with A levels is similar for men and women, we don’t know how many have A levels in maths and physics.
Summary and some questions

- We have a significant attainment gap between men and women on our level 2 physics module; we have ruled out many possible explanations but further investigation is of vital importance.
- Block 2 (Describing motion) and Block 3 (Predicting motion) may be creating particular problems.
- Particular questions (not question types) may be causing particular problems.
- We know that most girls who do maths and physics A level go straight to University; does this mean that the female OU population has a relatively smaller proportion of students with A levels in maths and/or physics?
- Our level 1 modules prepare students for the content of S207, but do they prepare students for the question types?
- Are our teaching materials and questions sufficiently clear for students for whom English is not their first language?
- Women appear to be more likely to give up if they are finding the module difficult. Is this because they have a different motivation for student/less time/less confidence?

Next steps

- We are making subtle changes to the tuition strategy for S217 (S207’s replacement).
- We are surveying (male and female) students to find out more detail about their previous qualifications, whether they consider English to be their first language, and their perception of their preparedness to study S207/S217.
- We are working with a statistician to model which demographic factors may be combining to contribute to success or the lack of it – for all students.
- We are very interested in further work on the factors that contribute to student success or the lack of it – across the sector. If you would like to work with us, please contact Sally.Jordan@open.ac.uk (@SallyJordan9).
Appendix B - Overview of Science MSc Gender Statistics: 2009/10 - 2013/14

This paper was presented and discussed at a JAS meeting in April 2015 and is based on the latest data available.

1. Method

Four percentages were considered: completion (completion / registration), pass (pass / completion), merit (merit / completion), and distinction (distinction / completion). Uncertainties given in brackets are based on Poisson statistics. When uncertainties overlap, no significant difference between the results is assumed.

2. Comparisons across all modules

3,906 students registered for Science MSc-level modules over the four years considered. 56% (±1) were female. There were no gender differences in the total completion, pass, and merit percentages. The total distinction percentages were 20% (±1) for females and 16% (±1) for males.

3. Comparisons within modules

18 different modules had presentations during this period, counting the three SX810 versions separately (SXB810, SXM810, and SXP810). No module showed a gender difference in completion or pass percentages. Table 1 lists the only statistics that showed gender differences within modules.

<table>
<thead>
<tr>
<th>Module statistic</th>
<th>Female</th>
<th>Male</th>
</tr>
</thead>
<tbody>
<tr>
<td>S819 merit</td>
<td>44% (±7)</td>
<td>31% (±5)</td>
</tr>
<tr>
<td>S825 merit</td>
<td>37% (±4)</td>
<td>23% (±3)</td>
</tr>
<tr>
<td>SD815 merit</td>
<td>60% (±14)</td>
<td>25% (±18)</td>
</tr>
<tr>
<td>SEH806 merit</td>
<td>27% (±4)</td>
<td>15% (±4)</td>
</tr>
<tr>
<td>S807 distinction</td>
<td>35% (±4)</td>
<td>23% (±4)</td>
</tr>
<tr>
<td>S808 distinction</td>
<td>14% (±3)</td>
<td>8% (±2)</td>
</tr>
<tr>
<td>SH804 distinction</td>
<td>22% (±4)</td>
<td>13% (±5)</td>
</tr>
<tr>
<td>SX805 distinction</td>
<td>33% (±9)</td>
<td>10% (±7)</td>
</tr>
<tr>
<td>SD805 distinction</td>
<td>4% (±1)</td>
<td>10% (±4)</td>
</tr>
</tbody>
</table>

Table 1: Gender differences in merit and distinction percentages

<table>
<thead>
<tr>
<th>Presentation statistic</th>
<th>Female</th>
<th>Male</th>
</tr>
</thead>
<tbody>
<tr>
<td>SH804 2012B completion</td>
<td>76% (±13)</td>
<td>48% (±15)</td>
</tr>
<tr>
<td>S810 2010B merit</td>
<td>50% (±17)</td>
<td>17% (±10)</td>
</tr>
<tr>
<td>S825 2013J merit</td>
<td>28% (±7)</td>
<td>10% (±4)</td>
</tr>
<tr>
<td>SD815 2014B merit</td>
<td>60% (±14)</td>
<td>25% (±18)</td>
</tr>
<tr>
<td>SEH806 2011B merit</td>
<td>34% (±9)</td>
<td>9% (±6)</td>
</tr>
<tr>
<td>SEH806 2013B merit</td>
<td>21% (±7)</td>
<td>6% (±6)</td>
</tr>
<tr>
<td>SEH806 2014B merit</td>
<td>29% (±10)</td>
<td>4% (±4)</td>
</tr>
<tr>
<td>S807 2011B distinction</td>
<td>39% (±10)</td>
<td>18% (±9)</td>
</tr>
<tr>
<td>S808 2010B distinction</td>
<td>16% (±7)</td>
<td>3% (±3)</td>
</tr>
<tr>
<td>S810 2012K distinction</td>
<td>63% (±18)</td>
<td>26% (±10)</td>
</tr>
<tr>
<td>S825 2012J distinction</td>
<td>12% (±5)</td>
<td>2% (±2)</td>
</tr>
<tr>
<td>S825 2013J distinction</td>
<td>12% (±4)</td>
<td>4% (±3)</td>
</tr>
</tbody>
</table>
Table 2: Gender differences in merit and distinction percentages

4. Comparisons of presentations

4.1. Gender comparisons within presentations

Out of the 61 presentations considered, none showed a gender difference for pass percentage. Table 2 lists the only statistics that showed gender differences within presentations.

4.2. Variations between presentations of the same module

No variations in completion and pass percentages were observed between presentations of the same module. Figure 1 shows the best candidates for possible trends in distinctions and merits.

Figure 1: Differences in merit and distinction percentages between successive presentations of the same module
S810 suggests a trend towards more distinctions among female students coinciding with the change from B to K presentation. An equivalent trend is not apparent for male students. No other Science MSc modules changed its presentation schedule during the period considered. Incidentally, the S810 data suggests an inverse relationship between distinction percentages and merit percentages.

S825 indicates a trend for falling distinction and merit percentages for male students with time. Any possible suggestion of a similar effect in the female data is undermined by the fact that that all the uncertainties on the data points overlap.

The SEH806 data suggests a small increase in distinctions (for both males and females) with time. No effect was observed in merits, except for an unusually high merit percentage for males in 2010B.

5. Summary

The strongest take home message from analysis is that the great majority of the MSc statistics show no evidence for gender differences or significant between successive presentations.

The only convincing difference is that a higher percentage of females achieve distinctions than males. To look for explanations of this global effect, it would be interesting consider similarities between the four individual modules that clearly show females achieving more distinctions: S807, S808, SH804, and SXM810 (only SD805 shows the opposite). Although several individual modules also show increased merit achievement by females, there is no significant global effect in the merit data.

The only module that changed presentation schedule (from B to E) showed an increase in female distinctions and a decrease in female merits, whereas the male performance was apparently unaffected. It would be interesting to compare this result with relevant undergraduate modules and / or with MSc modules outside the Science faculty.

Finally, it would be interesting to investigate the fall in male distinction and merit achievement in S825 from 2010 to 2013.

Sam Eden
Appendix C - JAS discussion paper – Recruitment in DPS

This paper was presented and discussed at a JAS meeting in January 2015 and is based on March 2014 data. It is presented here as evidence of the analysis conducted into our recruitment practices and not as supplemental data.

1. Background

1.1 DPS are committed by our JAS action plans to:
   - Identify academic staff who have not completed recruitment training within the last two years
   - Investigate feasibility of holding a dedicated recruitment training day
   - Create DPS-specific guidance on best practice in interviewing
   - Obtain annual reports on the gender ratio of interview panels

1.2 This report also fulfils the following action point:
   - Receive and scrutinise DPS recruitment reports by gender, role and discipline.\(^7\)

2. DPS recruitment data

2.1 Recruitment data for DPS is split into normal (competitive) vacancies and direct appointments (named candidates). Data is supplied for each vacancy by Science HR staffing team and then compiled into useable format for analysis. Data is provided up to the end of March 2014.

2.2 Since 2012, there have been 17 normal vacancies and 37 direct appointments recruited; 51 appointments have been made (15 normal and 36 direct).

2.3 The discrepancy between the number of direct appointments available and those recruited is down to the STEP vacancy (PhD-PDRA bridge) that is not handled via the official recruitment process, but instead by the postgraduate tutors. No data is available on this selection process, but it is constrained by the demographic of those students in their final year.

3. Normal vacancies

3.1 Since March 2013 (JAS submission data), only 2 normal vacancies have been advertised so it is appropriate to look at the data over a 3-year period as per JAS submissions.

3.2 The dominance of direct appointments corresponds with the number of researchers recruited into fixed-term contracts, funded via external grants where a ‘named candidate’ is common.

3.3 Since March 2012, 26% of the 183 applicants for normal vacancies were women; this reflects 2.67 applications from women per vacancy and is below the current

\(^7\)We have not disaggregated the data by discipline because of the low numbers involved.
female staff base in DPS. Only 2 central academic positions have been advertised in this time: an SL (5 of 12 applicants were women, a healthy proportion) and a Professor (no women, only 2 men applied).

3.4 Since March 2012, 65 candidates were shortlisted for normal vacancies; 33% (17) of these were women. Of those applicants to researcher roles, 22% (13) of the shortlisted candidates for normal vacancies were women, which is below the proportion of women already in that role. 4 out of 5 of those shortlisted to the SL position were women, which is well above the proportion of women already in that role.

3.5 Of the 15 normal vacancies filled, 4 (33%) were filled by women – one SL and 3 researchers. Recruitment of women researchers was therefore 3 out of 14 (21%), consistent with the proportion that were shortlisted and marginally below the proportion that applied.

4. Direct appointments

4.1 46% of all direct appointments (17 of 37) occurred in 2013/14, and most (34) were to researcher roles.

4.2 Since 2012, there has been a decrease (38% to 25%) in the women candidates for direct appointments.

4.3 33% (6) of fellows appointed in that period were women (n=11), an increase on previous years.

5. Internal versus external candidates

5.1 For the 17 normal vacancies, 95% were from external candidates; this figure is the same as the external applications to just the researcher role. Although very low numbers, this same trend is seen for the academic positions also.

5.2 25% of the external candidates were women, consistent with the overall recruitment figures. However 56% of internal candidates were women.

6. Discussion of recruitment data

6.1 The proportion of women that are appointed is below the proportion of women applicants so both application and selection needs addressing.

6.2 Central academic positions attract a lower relative proportion of women than researcher roles, but the numbers are very low.

6.3 DPS appears to be more attractive to internal women than external.

6.4 The increase in women fellows, but a decrease in women appointed into direct appointments suggests that numbers of women who are ‘named candidates’
funded by external grants has decreased.

6.5 Action is needed to attract women to DPS and our vacancies, particularly for researcher positions that have competitive recruitment. Activity is being taken via the University STEM Gender Equality Team in this area that will benefit DPS, however, our JAS action plans outline the following action that could be used for this:

- Determine a DPS ‘values and expectations statement’
- Include active images of DPS staff members on the DPS web pages
- The implementation of the JAS webpages (not in the action plan) may also contribute to attracting more women.

6.6 Staffing data also indicates that the number of women on FTCs has increased. In March 2014, 43% of women were on FTCs, mostly in the researcher role.

7 OU recruitment training – policy and practice

7.1 OU recruitment guidance states that:

- All staff are obliged to comply with current legislation when conducting interviews. The University is committed to creating a diverse workforce to support our core values, which encourage us to be inclusive, innovative and responsive.
- The University requires all interviewers to undertake Recruitment and Selection training.
- It is the responsibility of the Chair [of the selection panel] to ensure that all members of the panel have received appropriate training or a briefing on the OU’s recruitment and selection policy.

7.2 It is generally interpreted that all chairs of interview panels must have undertaken formal OU recruitment training; panel members are not obliged to do so, but the panel chair should establish there is sufficient expertise to conduct the interviews.

7.3 2010 was chosen as the cut-off for investigating recruitment training in DPS since that is when the Equality Act was brought in harmonising all previous equality legislation. ‘This Act aims to provide the same levels of protection from discrimination across all the protected characteristics and across all sectors, where appropriate. The protected characteristics are: age, disability, gender reassignment, marriage and civil partnership, pregnancy and maternity, race, religion and belief, sex, sexual orientation.

7.4 OU recruitment training has been revised in light of the introduction of the Equality Act (2010).

7.5 LMS records several different recruitment training options over the period 2010-14:

- Effective recruitment and selection for Science (2 days duration)
- Effective recruitment and selection refresher for Science (1 day)
- Recruitment and Selection online module (0.5 days)
7.6 In 2014, there are only two recruitment training sessions offered to staff:
- Recruitment and Selection online module (0.5 days)
- Selection interviewing skills (1 day)

More information can be found on the HR Learning and Organisational development website: [http://intranet.open.ac.uk/aps-sites/human-resources/hrd/p3_2.asp](http://intranet.open.ac.uk/aps-sites/human-resources/hrd/p3_2.asp)

7.7 There is no HR policy that requires staff to refresh their recruitment training after any given timescale.

7.8 It is up to the Faculty to determine if there is a need for more frequent training and they advise that, where recruitment happens frequently, it is not generally a requirement for someone to redo the training over any given timescale.

7.9 Rather than recommend re-training, the Faculty recruitment coordinator meets with each panel chair before recruitment to raise awareness of current issues, legislative requirements etc.

7.10 The new supervisor training module on the VLE will contain a small amount of recruitment advice, however staff will be directed to the Recruitment and Selection online module for formal training.

8. **DPS staff uptake of recruitment training**

8.1 Data was obtained from the LMS system in September 2014 identifying those academic staff that have engaged in recruitment training since 2010. Some staff may have taken training since the date the report was generated, and some staff may have taken the training in the month prior to the report (this is the time it takes for the VLE to feed into LMS).

8.2 Only 11 of 59 academic/research staff (19%) have completed any of these recruitment training sessions since 2010.

8.3 Only 1 member of staff has completed the Selection Interviewing Skills (1 day) training.

8.4 A further LMS search looking back to 2008 revealed 4 more staff had undertaken recruitment training, i.e. a total of 15 staff have undertaken recruitment training since 2008.

9. **Discussion of recruitment training**

9.1 The majority of DPS academic staff (and some research staff) are involved in recruitment of other staff and PhD students, yet, since 2010 only 19% have
‘recent’ training. This includes STs, who are responsible for the recruitment of ALs. It also includes those who may be on the internal selection panels for fellowship schemes (e.g. Earnest Rutherford and Aurora fellowships).

9.2 JAS discussions originally suggested that recruitment training should be refreshed every 2 years, based on good practice from other institutes, however this has been revised to every 3 years because of the investment in staff time needed to fulfil this.

9.3 Although the need for recruitment training should be identified within CDSA, this process is not robust (See CDSA paper, Nov 2014) and instead, targeting staff who are frequently called on to chair recruitment panels may be more effective.

9.4 Since the recruitment training is now primarily delivered via an online module, holding a dedicated DPS recruitment training (as per action plan) event needs further discussion.

9.5 The JAS team have not yet received any data on the gender ratio of interview panels, although recruitment data on applications has been provided. This needs to be actioned by the DPS administrator and the Faculty staffing team.

10. Recommendations and timeline for training

10.1 LMS to be interrogated further for more recent data (by end of Nov 2014) and the results shared with the DPS management team.

10.2 At beginning of Dec 2014, those staff who have not completed recruitment training since 2011 are contacted by the DPS administrator/HOD/HoDi to strongly encourage them to complete the Recruitment and Selection online module.

10.3 At the beginning of Dec 2014, those staff who have undertaken the Recruitment and Selection online module within 3 years are contacted by the DPS administrator/HOD/HoDi to encourage them to complete the Selection Interviewing Skills training.

10.4 From the beginning of Dec 2014, those staff involved in recruitment activities (including recruitment of ALs and PhD students) are checked to ensure they have undertaken recruitment training within 3 years prior to the interview and, if not, are strongly encouraged to do so before involvement in any further recruitment.

10.5 LMS be interrogated again in Feb 2015, in order for a reminder about training be sent to those that still require it prior to the recruitment round for PhD students.

10.6 That all JAS team and DPS management should have undertaken recruitment training before the end of January 2015 if not already completed within the previous 3 years.
10.7 That recruitment training reports be generated annually, preferably in January of each year to ensure training reminders are sent prior to PhD student recruitment rounds, and to ensure this is added into CDSA discussions.

11. **Risks**

11.1 Time constraints may encourage staff to only engage superficially in the online training module, if they can be persuaded to engage at all. Staff are to be reminded this is half a day every three years.

11.2 Face to face training might be seen as a time-sink and avoided entirely.

11.3 Staff may be resistant to any training or re-training if they believe themselves to be sufficiently skilled in recruitment. Staff need to be made aware of new external legislation that have changed the content of recruitment training.

11.4 Staff may be unwilling to engage in training since there is no incentive or penalty. A face to face event with an incentive could be considered, or the enforcement of ‘no training, no recruitment’ rule.

11.5 Engagement might be improved if HOD/HoDis/DMT/JAS team lead by example.

12. **Best practice guidance for interviews**

12.1 To date, no best-practice guidance has been generated, and this needs auctioning as soon as possible.

12.2 We recommend that:

- All interview panels are mixed gender (i.e. minimum of one woman or one man)
- The panel Chair and members must have completed formal recruitment training within the previous 3 years
- The panel Chair must have completed the Selection Interviewing Skills training.
Appendix D - JAS discussion paper – CDSAs in DPS
This paper was presented and discussed at a JAS meeting in November 2014 based on data collected earlier in 2014. It is presented here as evidence of the analysis conducted into our CDSA practices and not as supplemental data.

1. Background

1.1 As part of our JAS action plans (Action 17.1) we are committed to: ‘*Improve DPS engagement with CDSA towards 100% of all staff*’.

1.2 The IoP particularly identified, in their feedback on our Juno submission, that we needed to ‘*look at how to achieve a higher uptake of appraisals*’.

1.3 In our JAS submissions, we recorded CDSA completion at 75% (meeting held) and 40% (completed paperwork). This data also took a full 12 month period, which spanned the stragglers on one CDSA round and the bulk of the following round.

1.4 Part of the improvement involved adapting the way the stages in the CDSA process are recorded and monitored, in-house. DPS now have a system of recording CDSA progress (kept by DPS admin team) that takes into account the stages prior to submission of paperwork to the Deanery (outlined in Appendix 1).

1.5 Although not without inaccuracies, the DPS recording system is still an improvement on previous years where no knowledge of interviews or paperwork was kept in-house.

1.6 This paper presents the 2014 CDSA completion data for academic/research staff as recorded by the DPS system.

2. Overall DPS CDSA completion

2.1 56 academic/research staff were eligible for a CDSA in 2014.

2.2 69% (38) of these have had an appraisal meeting in 2014.

2.3 18 staff record no appraisal activity for at least 12 months, some for up to 3 years

2.4 Of those staff that have had an appraisal meeting, only 55% of them (21) have had paperwork sent to the deanery, i.e. DPS only recorded a return of 38% of staff submitting CDSA paperwork to the Deanery.

3. DPS CDSA completion by gender

3.1 20 women and 36 men (from the academic/research staff cohort) were eligible for CDSA.

3.2 Of these, 16 women and 23 men (80% and 64% of those eligible, respectively) are recorded as having had a CDSA meeting.
3.3 Of those women that have had an appraisal meeting, 63% of them (10) have had paperwork sent to the deanery, compared with 48% (11) of men appraised.

3.4 It therefore appears that women are more engaged in the CDSA process than men.

4. Discussion

4.1 The new-style DPS recording system shows that almost ¾ of staff have been appraised but the barrier to completion is the generation of the associated paperwork for sign-off by the Deanery. This paperwork may be stuck in the system at a number of places:

- The appraisee may not have completed it/ passed it to the appraiser
- The appraiser may not have added their comments/ passed the document back to the appraisee
- The appraisee may not have agreed with the appraisers comments/passed the signed document back to the appraiser for submission
- The appraiser may not have passed the paperwork to the Deanery
- The appraiser/department/deanery may have omitted to record the completion of paperwork

4.2 As previously discussed in 2013, without some communication with the individual staff involved, it is impossible to identify which of these may be the main barrier to submission of paperwork to the Deanery without some communication with individual staff involved.

4.3 Almost ¼ of academic/research staff in DPS have not engaged in CDSA in 12 months, and some have not engaged in CDSA for up to 3 years. DPS are committed to identifying why uptake is not 100%, but it must be acknowledged that some staff have made an active choice not to engage.

4.4 Although it is encouraged to have CDSAs in Spring/Summer to inform workload planning, in reality, CDSAs may be annually, coinciding with the member of staff’s start date. Therefore tracking completion is difficult, but could be improved if DPS introduced a standard period for all appraisals year on year. In the interim, the formal CDSA ‘round’ for each year (ending with expected completion of paperwork in September of each year) is the only data available for use.

5. Progress against JAS Action points & further action

5.1 Action point 17.1 (Improvement in CDSA completion): We cannot claim an improvement in CDSA uptake because the data presented here is lower than those used in the JAS submission documents; a decline in uptake is suggested over the last 12 months. However, the two data reporting periods are not comparable and it will require another full round before any improvements can be seen. It should be insisted upon that appraisers log the dates of appraisal meetings with the DPS admin team, even if paperwork is not completed.
5.2 Action point 17.2 (*Include the benefits of CDSA in the DPS survival document*). This action has not begun but needs action by the DPS administrator and JAS team before the 2015 CDSA round.

5.3 Action point 17.3 (*Use DPS staff survey to understand why staff engagement in CDSA is low*):

- DPS can either instigate a survey of the 25% of staff that do not engage in CDSA at all using an online survey, or they could be contacted by the DPS admin team directly. Those staff that are recorded as not having had any CDSA in over 12 months should be especially targeted.
- Those staff that are recorded as having had a CDSA meeting, for whom there is no record of their paperwork, should be contacted by the DPS admin team to establish where (according to the list of possible barriers in 4.1, above) their paperwork is up to and why it has not progressed to submission.
- It is expected that only those staff that have completed the CDSA process be considered during the merit award process (or for promotion?). It is unclear whether this is enforced in DPS, and if it is, why this is not a sufficient incentive for engagement.
- JAS should investigate why women are more compliant with CDSA, yet less successful in promotion rounds.

5.4 VKP has previously met with the Science HR partner (Gabi Evans) and Learning & Organisational Development contact (Rachel Troughton) about possible staff development activities that could engender further support for CDSA within DPS.

**Appendix 1**

**AA** Data was provided in October 2014 for the 2014 CDSA round, which took place between April and October 2014.

**AB** Data was collated by DPS admin team, via a DPS system recording the following:

- Name of appraisee and appraiser
- Location and discipline of appraisee
- Job title
- Last CDSA date as recorded by the deanery (last set of paperwork received)
- Date of last CDSA meeting held in DPS – requested from each appraiser
- Date 2014 paperwork was sent to deanery
- Whether the record is complete or not

**AC** The data must be treated with caution for several reasons:

- The location and disciplines were incorrect in some case
- The statement of completion was incorrect and some records were complete yet paperwork was not sent to deanery. i.e. it is unclear what ‘completion’ is.
- Some staff were recorded as not having had an appraisal meeting, but had. Where identified, these have been added to our own spreadsheet.
- There is no record of where any unfinished paperwork sits (with appraiser or appraiser)
- There is no record of whether the paperwork is returned from the Deanery
- We must assume that if an appraisal date is recorded by the Faculty, that means the Faculty have signed off and returned the paperwork (since only individuals, not department, received signed off copies).
- Staff numbers do not directly correlate with HR data because of the time lag in reporting points