

Workforce Survey of 2016 US AAS Members Summary Results

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OVERVIEW – Who was Surveyed

The sample consisted of 2,798 AAS members in the United States. Members who lived outside of the U.S. were not included in the survey.

Of respondents, 64% were full members, 18% were junior members, 9% were associate members, 8% were emeritus and 1% were educational affiliates. This distribution was similar to the distribution of the entire sample, which was comprised of 61% full members, 21% junior members, 9% associate members, 9% emeritus, and 1% educational affiliates. The distribution of the sample was similar to the distribution of the entire membership. Data were collected beginning in August 2016 and closed in October 2016. The overall response rate was ~ 63% with 1,795 respondents.

HIGHLIGHTS

- Nearly four-fifths of AAS members surveyed had earned a PhD (**Table 1**). The most common fields for these degrees were physics and astronomy or astrophysics (**Table 4**).
- Universities and 4-year colleges employ over half (55%) of AAS members with PhDs (excluding current postdocs). Over half of these (57%) are tenured, with another 17% on tenure-track (**Tables 7-8**).
- Of employed AAS members, 17% reported that they were in temporary positions (**Table 6**). Most of these were visiting and adjunct professors or research assistants, and had specific ending points.
- Employer type, postdoc experience, and years since degree had statistically significant impacts on the average salaries of AAS members (**Table 18**).
- Members viewed lack of funding, an oversaturated job market, and lack of diversity in hiring at upper levels as pressing challenges to the field of astronomy (**Appendix**).

RESULTS

US AAS MEMBERS – Academic Experience and Employment Status

Table 1 – Highest Degree Earned¹

Highest Degree Earned by US AAS Members, 2016		
	%	N
PhD	79	1409
Master's	12	221
Bachelor's	7	134
No college	1	20
Other	1	9
Total N		1793

- 15% of respondents (N=267) were currently enrolled in a degree program
 - 71% of bachelors were currently students
 - 61% of masters were currently students
 - All respondents who selected “no college” were students

- All current students indicated that they planned to earn a PhD when asked “what is the highest degree you are planning to obtain?”

¹ See Figure 1 in Appendix

Table 2 – Year of Degree

Year of Degree of US AAS Members with PhDs, 2016			
	25 th percentile	Median	75 th percentile
Year of PhD – All	1980	1994	2005
Year of PhD – Males	1978	1990.5	2002
Year of PhD – Females	1990	2002	2010

- The median year that AAS members with doctorates earned their degrees was 1994.
- A quarter of respondents with PhDs earned their degrees in or after 2005.

Table 3 – Country of Degree²

Country of Degree of US AAS Members with PhDs, 2016		
	%	N
In the U.S.	84	1171
Outside of the U.S.	16	227
Total N		1398

² See Figure 2 in Appendix

Table 4 – Field of Degree³

Highest Degree Earned by US AAS Members, 2016					
Field	Bachelors	Masters	PhD	Total	
	%	%	%	%	N
Astronomy or astrophysics	42	63	73	69	1208
Physics	57	31	30	32	1189
Planetary Science	0	2	2	2	36
Engineering	4	3	1	2	27
Math	9	.5	.5	1	20
Something else	14	14	3	5	94
Total N					1738

*The sum of percentages exceeds 100 because respondents were asked to check all that apply.

- The vast majority of AAS member respondents earned their degrees in astronomy, astrophysics, or physics.
- Common engineering subfields included electrical, mechanical, and aerospace.
- The responses for “something else” were almost entirely STEM fields, with chemistry, space science and geophysics among the most common.

³ See Figure 3 in Appendix

Table 5 – Employment Status⁴

Employment Status Of US AAS Members, 2016		
	Total	
Employment Type	%	N
Employed, full-time	79	1141
Employed, part-time	7	103
Not employed	14	201
Total	100	1445

*Responses include members who were listed as students

- The vast majority (88%) of not employed AAS members were retired. The rest were split between those who were currently seeking employment (n=16) and others who chose voluntarily to be out of the workforce (n=9).

Table 6 - Employment Type⁵

Employment Type of US AAS Members, 2016		
	Total	
Position type	%	N
Potentially permanent	83	1027
Temporary	17	212
Total	100	1239

⁴ See Figure 4 in Appendix

⁵ See Figure 5 in Appendix

Table 6b – Employment Type and Sector

Employment Type and Sector US AAS Members, 2016		
Sector	Position type	
	Potentially Permanent	Temporary
University or 4-year college	43%	10%
Govt. lab or research facility	13%	2%
Research Institute	8%	2%
Observatory	7%	1%
Industry	3%	*
Other	3%	*
Other govt.	*	*
2-year college	*	*
Planetarium or museum	*	*
Self-employed	*	*
Secondary school	*	*
TOTAL %	83%	17%
<i>Total N</i>	<i>1027</i>	<i>212</i>

* Less than 2% (n<25)

- Half of respondents (50%) in temporary positions were in postdoctoral positions.
- Other temporary positions included visiting and adjunct professors, research assistants, and contract jobs.

Table 7 - Current Employer⁶

Current Employer of US AAS Members with PhDs, 2016		
	Total	
Employer or Sector	%	N
University or 4-year college	55	523
Govt. lab or research facility	16	155
Observatory	9	84
Research Institute	8	78
Industry	3	32
Other govt.	2	19
Self-employed	1	5
2-year college	1	8
Planetarium or museum	1	7
Secondary school	-	2
Other	3	27
Total	100	940

Includes full-time employed respondents with PhDs excluding current postdocs.

- Over half (55%) of AAS members with PhDs were employed in academia, either at a university or 4-year college.

⁶ See Figure 6 in Appendix

Table 8 – Academic Status

Academic status of US AAS Members working in Universities, 2016		
Status	%	N
Tenured	57	317
Tenure-track	17	95
Soft money	8	47
Long-term (but not tenured)	16	89
Other	2	12
Total N		560

The data represent respondents (all degree levels) employed full-time at universities and 4-year colleges, excluding postdocs.

- More than half (57%) of AAS members employed in universities were tenured, and an additional 17% were tenure-track.
- About a sixth reported being in long-term positions, but not on tenure-track.
- The “other” category was comprised of respondents in temporary positions, like visiting professorships and short term contracts.
- It is possible to gain tenure in non-academic positions; however only respondents working in an academic setting were asked about their tenure status.

EMPLOYMENT – Postdocs and Careers

Table 9 – Postdoctoral Experience

Postdoctoral Experience by Groups of US AAS Members, 2016			
Group	Took Postdoc %	Median Duration (years)	Interquartile Range Years in Postdoc [‡]
Current postdocs	-	3*	1-4
Employed, with PhD	80	4	3-6
Employed, PhD in 2000 or after	77	4.5	2-6
Employed, PhD before 2000	81	4	2-5
Retired, with PhD	57	2	2-4

*Current postdocs' duration is ongoing.

‡The interquartile range contains the middle 50% of respondents.

- Members who are currently working in postdoctoral positions (n=114) had a median degree year of 2013. Over a third (35%) of these respondents have been working in postdoctoral positions for at least 3 years, and one-eighth are 5 years or more into their cumulative postdoc experience.
- Eighty percent of respondents (n=875) who earned doctorates and were employed at the time of the survey took a postdoctoral position after earning their degrees. These positions lasted for a median length of four and a half years.

Retired AAS members had a median degree year of 1970. 57% of retired members who had earned PhDs took a postdoc (n=92). Retired members' median duration of postdoc experience was 2 years, which is half as long as the median length of currently employed AAS members with PhDs.

Table 10 – Desired Employer of Postdocs⁷

Desired Employer of US AAS Member Postdocs, 2016		
Desired Employer or Sector	%	N
University or 4-year college	57	66
Research Institute	21	24
Govt. Lab or research facility	7	8
Observatory	7	8
Planetarium or museum	1	1
Industry	3	4
Other	3	3
Total N		117

Table 11 – Current Employer of Former Postdocs

Current Employer of US AAS Members who took Postdocs, 2016		
Employer or Sector	%	N
University or 4-year college	58	502
Govt. Lab or research facility	15	135
Research institute	9	80
Observatory	8	72
Industry	2	21
Other govt.	3	25
Self-employed	1	5
Planetarium or museum	-	4
Other	4	31
Total N		872

Excludes current postdocs.

- Desired employers for AAS members in postdoctoral positions (**Table 10**) and actual current employers of former postdocs (**Table 11**) differed slightly.
 - A larger proportion of current postdocs desired to work in research institutes (21%) than the proportion of AAS members with postdoctoral experience who actually worked in research institutes (9%).
 - Current postdocs wanted jobs in academia at about the same rate as actual employment for former postdocs (57% vs 58%)
 - In contrast, desire to work at government research facilities was less (7%) than the reality (15%).

⁷ See Figure 7 in Appendix

Table 12 – Postdoc Experience by Employer⁸

Postdoc Experience by Employer Type of US AAS Members, 2016		
Employer or Sector	Took a postdoc	
	%	N
University or 4-year college	80	628
Govt. Lab or research facility	75	179
Research Institute	72	111
Observatory	68	106
Self-employed	50	10
Industry	47	45
Other	59	41
Total*	73	1189

* Excludes current postdocs. Employer categories with N < 25 are excluded from the table but included in the totals. This includes Other government, 2-year college, planetarium or museum, and secondary school.

- Four-fifths of AAS members working at a university or 4-year college had taken a postdoc.
- Those who had taken postdocs comprised 75% and 72% of respondents working in government labs and research institutes, respectively.
- About half of AAS members working in industry took a postdoc.

⁸ See Figure 8 in Appendix

Table 13a - Main Activity in Current Job: Respondents not in Postdocs

Main Activity in Current Job Of US AAS Members not in Postdocs, 2016				
Activity	University, 4-year college		All other sectors	
	%	N	%	N
Teaching	39	238	5	31
Devising, conducting observations	18	112	18	103
Theory, N-body simulations	12	78	5	29
Instrumentation, telescope design	6	35	15	82
Data visualization, mining	5	30	7	37
Education or public outreach	2	14	5	30
Management, administration	1	4	7	41
Multiple activities	4	25	4	22
Data analysis	1	7	2	10
Laboratory astrophysics	1	7	2	9
Other research	2	13	2	10
Software, IT	-	1	3	14
Other	8	52	25	137
Total N		616		555

- Management, administration, software, IT, data analysis, and other research were added based on their frequency in the write-in responses of those who originally selected “Other”.
- The most commonly written in multiple activities were “research and teaching”.
- The “Other” category was very diverse, and included respondents indicating that they provided technical support regularly.
- Regardless of employment sector, about 20% of AAS members indicated that devising and conduction observations was the main activity of their job.

Table 13b - Main Activity in Current Job: Respondents in Postdocs

Main Activity in Current Job Of US AAS Members in Postdocs, 2016				
Activity	University, 4-year college		All other sectors	
	%	N	%	N
Teaching	3	2	-	-
Devising, conducting observations	39	28	59	24
Theory, N-body simulations	27	19	7	3
Instrumentation, telescope design	4	3	7	3
Data visualization, mining	13	9	20	8
Education or public outreach	-	-	2	1
Management, administration	-	-	-	-
Multiple activities	-	-	-	-
Data analysis	6	4	2	1
Laboratory astrophysics	1	1	-	-
Other research	-	-	-	-
Software, IT	1	1	-	-
Other	6	4	2	1
Total N		71		41

Table 14 - Time Allocation in Current Job: Respondents not in Postdocs

Time Allocation in Current Job of US AAS Members not in Postdocs, 2016				
Activity	University, 4-yr college		All other sectors	
	Average Pct. of Time Spent on Activity	Respondents Doing this Activity %	Average Pct. of Time Spent on Activity	Respondents Doing this Activity %
Research (includes writing proposals, articles and books, and attending colloquia)	36	94	39	76
Teaching (class, lab time, and prep, office hours, other student contact related to teach or advising)	41	84	27	23
Service activities (TAC, proposal reviews, advisor committees)	13	80	12	57
Education & public outreach	9	53	15	37
Management	20	44	34	51
Observatory/mission support/instrument commission	24	23	45	47
Other	35	5	60	14
Total N		628		589

- As expected, the vast majority (94%) of AAS members employed at universities and 4-year colleges, including postdocs, performed research activities.
- AAS members employed outside of academia indicated that they spent more time on management activities than those employed at 4-year colleges and universities.
- Respondents employed in academia spent more time performing activities related to teaching, and were more likely to indicate that their jobs included service activities along with education and public outreach.

Table 14b – Time Allocation in Current Job for Postdocs

Time Allocation in Current Job of US AAS Members not in Postdocs, 2016				
Activity	University, 4-yr college		All other sectors	
	Average Pct. of Time Spent on Activity	Respondents Doing this Activity %	Average Pct. of Time Spent on Activity	Respondents Doing this Activity %
Research (includes writing proposals, articles and books, and attending colloquia)	72	99	74	95
Teaching (class, lab time, and prep, office hours, other student contact related to teach or advising)	17	45	8	21
Service activities (TAC, proposal reviews, advisor committees)	9	63	10	57
Education & public outreach	10	54	9	43
Management	13	20	6	17
Observatory/mission support/instrument commission	20	23	25	38
Other	51	5	50	14
Total		71		41

Table 15 – Primary Areas of Interest

Primary Areas of Interest of US AAS Members, 2016		
	%	N
Star formation & evolution	31	541
Galaxy formation & evolution	23	394
Solar systems, planetary science	23	392
Exoplanets	21	365
Astronomy education	20	338
Interstellar medium	18	318
Galactic structure and stellar pop.	18	307
Supernovae, GRBs, high-energy phenomena	17	301
Cosmology	17	299
Active galactic nuclei	16	281
Clusters of galaxies, large-scale structure	12	210
Astrobiology	9	158
Heliophysics	9	149
Other	18	319
Total N		1730

The sum of percentages exceeds 100 because respondents were asked to check all that apply.

- On average, respondents selected 2.5 primary areas of interest.
- Star formation & evolution was the most often selected area of interest, followed by galaxy formation & evolution, and solar systems & planetary science.

Table 15b – Primary Areas of Interest by Gender⁹

Primary Areas of Interest of US AAS Members with PhDs by Gender, 2016				
	Male		Female	
	%	N	%	N
Star formation & evolution	33	333	30	91
Interstellar medium	21	215	17	52
Galaxy formation & evolution**	20	205	30	91
Exoplanets	20	203	18	54
Solar systems, planetary science	20	200	20	60
Supernovae, GRBs, high-energy phenomena**	20	199	13	44
Cosmology**	18	186	12	37
Galactic structure and stellar pop.	18	186	15	47
Astronomy education	16	166	18	55
Active galactic nuclei	16	143	17	53
Clusters of galaxies, large-scale structure	11	113	13	41
Heliophysics	10	101	6	19
Astrobiology	8	86	7	21
Other**	21	209	13	40
Total N		1017		306

** Indicates a male-female difference with statistical significance at $\alpha < .05$

* Indicates a male-female difference with statistical significance at $\alpha < .1$

The sum of percentages exceeds 100 because respondents were asked to check all that apply.

- For three areas of primary interest (Galaxy formation & evolution, Supernovae, GRBs & high-energy phenomena, and Cosmology), gender was statistically significant. Men are more likely than women to be in Cosmology, along with Supernovae, GRBs & high-energy phenomena. Women are more likely than men to be in Galaxy formation & evolution.

⁹ See Figure 9 in Appendix

Table 16 – Funding Sources for Salaries¹⁰

Funding Sources for Salaries of US AAS Members 2016		
	% Receiving Funding	Average % of Total Funding
College/University	46	89
NASA	42	71
NSF	19	48
DOE	4	70
DOD	4	78
Foundation/Grant/Donors	3	69
Private Employer/Clients	3	70
Foreign Funding	1	73
Other Government	1	76
Smithsonian	1	100
AAS	-	85
Other	6	71
Total N		1017

- College and Universities were the most commonly reported sources of funding for salaries.
 - 64% of AAS members who indicated that they received funding from a college or university indicated that it was their only source of salary funding.

- In a separate question, members were asked what fraction of their salaries were covered by soft money (defined as grants, short-term funding sources, etc.). Thirty-nine percent of respondents indicated that at least a part of their salary was covered by soft money, with 21% indicating that soft money covered their entire salary.

¹⁰ See Figure 10 in Appendix

Table 17 – Funding Sources for Research and Education Projects¹¹

Funding Sources for Research and Education Projects of US AAS Members 2016		
	% Receiving Funding	Average % of Total Funding
College/University	32	64
NASA	55	73
NSF	29	59
DOE	4	68
DOD	4	73
Foundation/Grant/Donors	4	64
Foreign Funding	1	73
Other Government	1	34
Private Employer/Clients	1	48
Smithsonian	1	86
AAS	-	37
Other	8	63
Total N		1017

- Over three quarters (78%) of AAS members indicated that they were working on research or education projects.
- More than half (55%) of AAS members working on research or education projects received funding from NASA.
 - Half of AAS members receiving NASA funding for research and education indicated that it was their only source of funding.
- About one in eight (12%) of people receiving College or University funding and one in eleven (9%) receiving NSF funding said it was their only source of funding for research and education.

¹¹ See Figure 11 in Appendix

Table 18 – Variables Impacting Salaries

Variables Impacting Base Salaries of US AAS Members with PhDs, 2016		
Variable	Average Additional \$	Level of Significance
Working at a Government Lab	25%	**
Working at a Research Institute	11%	*
Working in Industry	28%	**
Working in Observatory	14%	**
Each additional year since earning PhD	1.5%	**
Having taken a postdoc	-	
Being male	-	
Race/Ethnicity	-	
Disability status	-	
Female and disabled	-	
Female and minority	-	

***p-value < .01

*p-value < .1

Data include respondents who have earned PhDs and are full-time employed excluding postdocs. N=744

- Regression analysis on the base salaries (not including bonuses, overtime, or additional compensation for summertime teaching or research) of full-time employed AAS members estimates the average increase in salary due to a given variable compared to average salaries in the absence of that variable. The variables dealing with employer type are compared to the salaries of those employed at universities or 4-year colleges. We controlled for employer type, postdoc experience, gender, and years since PhD.
- The regression equation constant (or intercept) was just over \$66,700. This represents the theoretical average salary in the absence of all variables (i.e. the average salary of all females working at universities with zero years of experience since earning their PhDs who did not take postdocs).
- For illustrative purposes, we can use this model to predict the average salary of respondents who earned their PhDs 10 years ago and work at a government lab. The percentage increases for gender and having taken a postdoc are excluded because they are not statistically significant. $66,700 + (10 \text{ years} \times 1.5\%) + 25\% (\text{gov't lab}) = \$93,380$
 - It is worth noting that this represents the average salary of a group of AAS members; salaries for individuals within the group will vary above and below this average.
- There was strong statistical evidence ($\alpha < .01$) of the effect of working at a government lab, or in industry and the effect due to the number of years since respondents earned their highest degrees.

Additional Salary Data

- The median salary of current postdocs was \$60,000. The interquartile range goes from \$50,000 to \$65,000.
- The median salary of tenure track employed in academics was \$76,000. The interquartile range goes from \$63,000 to \$93,000.

- We had 18 respondents (who were recent PhD grads—2011 and later) who were in employed in government. The median salary was \$66,865, and the interquartile range goes from \$61,750 to \$75,250.

Table 19 – Encouraging the Pursuit of an Astronomy Career

Encouraging the Pursuit of an Astronomy Career By Groups of US AAS Members, 2016					
	Student %	Current Postdoc %	Employed %	Retired %	Total %
Definitely or Probably	77	52	70	82	72
Possibly	19	42	26	15	24
No or Don't Know	4	6	4	3	4
Total N	<i>268</i>	<i>111</i>	<i>1173</i>	<i>183</i>	<i>1735</i>

Employed includes only full-time employed.

- A majority (72%) of AAS members indicated that they definitely or probably would encourage the pursuit of an astronomy career.
- Current postdocs were less likely than others to encourage pursuit of an astronomy career, with only 52% indicating that they would do so.
- Overall, very few respondents (4%) selected “No” or “Don’t Know” as a response to whether they would encourage the pursuit of a career in astronomy.

AAS MEMBERS – Demographics and Family

Several tables describing demographic and family-related issues are presented by gender and age group. Age groups are split between those born prior to 1983 (78% of respondents) and those born in 1983 or after (22% of respondents). There were just about 3 male respondents for every female respondent.

Table 20 – Gender¹²

Gender of US AAS Members by Age Group, 2016			
	Born before 1983 %	Born 1983 or after %	Total %
Male	78	53	72
Female	21	46	26
Other	-	-	-
Prefer not to respond	1	1	1
Total N	1317	321	1683

- A higher proportion of female respondents were born after 1983 (46%) than before (21%)¹³. This follows the historical trend of more women entering the field of astronomy.
- For members who have earned PhDs
 - 21% of the group born before 1983 are women
 - 44% of the group born 1983 or after are women

Table 21 – Marriage or Partnership Status^{14 15}

Marriage or Partnership Status of US AAS Members by Gender and Age Group, 2016			
Has been married or in a similar relationship	Born before 1983 %	Born 1983 or after %	Total %
Male	91	41	83
Female	90	45	72
Total N	1293	361	1654

- Overall, a higher proportion of males (83%) have been married or in similar relationships than females (72%). However, we can see that when the respondents are separated by age, this difference disappears and is an artifact of the increasing proportion of women in astronomy, meaning that there are fewer older women.

¹² See Figure 12 in Appendix

¹³ See Figure 13 in Appendix

¹⁴ See Figure 14 in Appendix

¹⁵ See Figure 15 in Appendix

Table 22 – Members with Children¹⁶¹⁷

US AAS Members with Children by Gender and Age Group, 2016			
Has children	Born before 1983	Born 1983 or after	Total
	%	%	%
Male	69	9	69
Female	53	4	34
Total N	1293	361	1654

- Fewer female respondents had children than their male counterparts.
- Of members with children who attended AAS meetings, 18% used provided childcare facilities.

¹⁶ See Figure 16 in Appendix

¹⁷ See Figure 17 in Appendix

Table 23 - Relocated with a Spouse or Partner

Relocated with a Spouse or Partner US AAS Members, 2016			
	Female %	Male %	Total %
Born before 1983			
Yes	36	12	17
No	54	81	75
N/A	10	7	8
Born 1983 or after			
Yes	12	8	10
No	48	53	51
N/A	40	39	39

- The majority of respondents (87%) who selected N/A when asked “Have you ever relocated because your spouse or partner relocated?” had never been married or in a similar relationship.
- Overall, about 16% of AAS members reported relocating.
- For those born before 1983, the proportion of female respondents reporting that they had relocated because of a spouse or partner was three times higher than the proportion of males.
 - 15% of female respondents and 6% of male respondents (8% overall) indicated that they currently maintain a residence in a different location from their spouses, partners, or children in order to work or study.
 - Over a third of male respondents (37%) and half of female respondents (50%) indicated that they had limited their career options because of someone else.
 - These types of family issues were described in the verbatim comments about challenges facing the field of astronomy (*Appendix*).

Table 24 – Disabilities¹⁸

Disabilities among US AAS Members, 2016		
Disability	%	N
I am deaf or have serious difficulty hearing	1.4	24
I am blind or have serious difficulty seeing even when wearing glasses	0.3	6
I have serious difficulty walking or climbing stairs	1.5	26
None of the above	94.7	1638
Prefer not to respond	2.5	43

- Most AAS members did not report any disabilities.

¹⁸ See Figure 18 in Appendix

Table 25 – Ethnicity¹⁹

Ethnicity of US AAS Members, 2016		
Ethnicity	%	N
White	84	1443
Asian or Asian American	9.1	157
Hispanic or Latino	3.5	61
Black or African American	1.0	18
American Indian or Alaska Native	0.7	12
Native Hawaiian or other Pacific Islander	0.1	2
Other	1.9	32
Prefer not to respond	3.9	67

Sum of percentages exceeds 100 because respondents were asked to check all that apply

- 3.7% of respondents checked more than 1 ethnicity.

¹⁹ See Figure 19 in Appendix

Table 26 - Sexual Orientation and Transgender Status²⁰

Sexual Orientation of US AAS Members, 2016		
Orientation	%	N
Heterosexual or straight	88.3	1513
Gay or lesbian	2.1	36
Bisexual	2.4	41
Transgender	0.2	4
Prefer not to respond	7.4	126

- This question was worded the same way as in 2013 for comparison between the two surveys. However, for the next survey round, transgender status will not be asked in the same question as sexual orientation.

²⁰ See Figure 20 in Appendix

Challenges facing the field of astronomy

AAS members were asked “What do you view as the most significant challenge the field of astronomy is facing in the areas of employment and/or career development?” Nearly all respondents (N=1507) responded to the open ended question with their thoughts. There were a number of common themes in the responses.

- The most common theme mentioned was a lack of funding for astronomy programs. There also seemed to be the feeling that the majority of funding was saved for specific kinds of programs, and did not necessarily trickle down to other parts of astronomy.
- The job market is over-saturated with similarly skilled and educated astronomy graduates, which forces AAS members to take any position they can get. Several respondents cited that getting a job seems to be more about who you have connections with than actual experience. There was a feeling that large projects involving large teams are throttling creativity and making it harder for individuals to make a mark on the field.
 - Multiple postdocs and low paying positions seem to be a necessity in advancing in academia.
 - Astronomy PhDs felt as though there was a lack of support and guidance for career options, specifically for how to get a non-academic career. They felt pressure to remain in academia from advisors and professors, and cited a lack of diversity in hiring practices.
- The field of astronomy is, like other science disciplines, plagued by sexism, and the upper levels of astronomy careers are dominated by specific demographics. Minorities are highly under-represented within the field as a whole, but particularly at senior levels. Hiring at upper levels does not represent the population of the United States, nor that of astronomy PhDs.

APPENDIX

The following graphs were provided by Dr. Ivelina Momcheva of the AAS Demographics Committee.

Figure 1: Highest Degree Earned by US AAS Members, 2016

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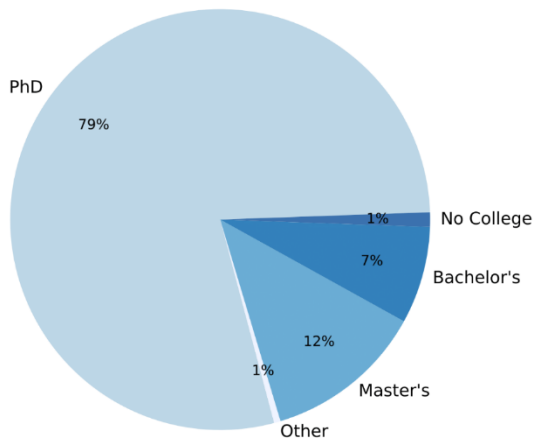


Figure 2: Country of Degree, US AAS Members, 2016

Country of Degree, 2016

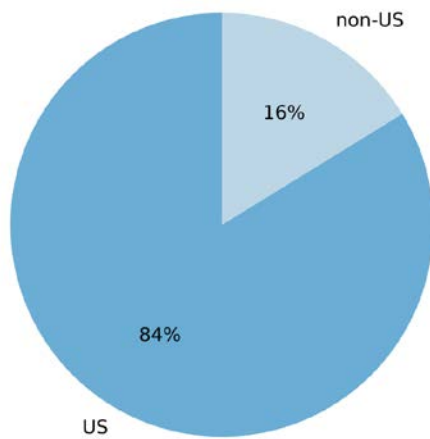


Figure 3: Field of Degree by Highest Degree Earned, US AAS Members, 2016

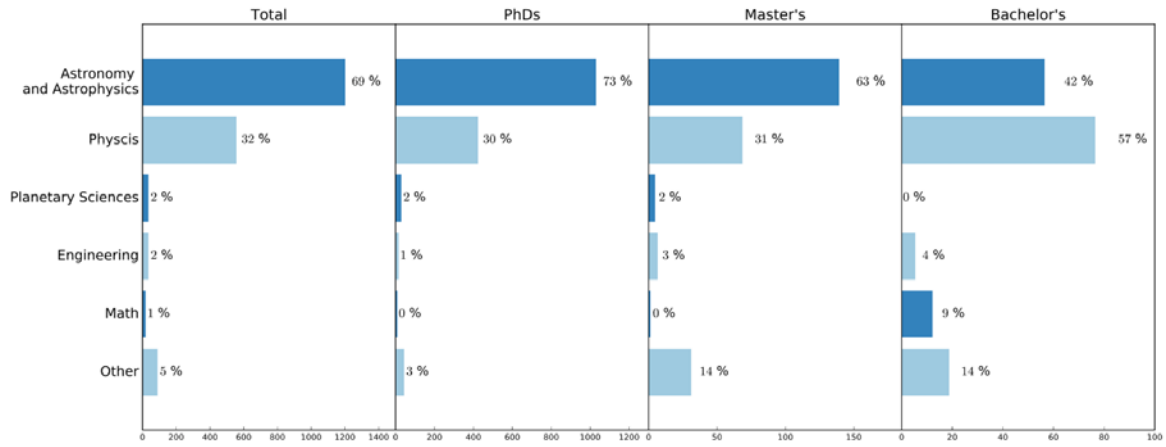


Figure 4: Employment Status, US AAS Members, 2016

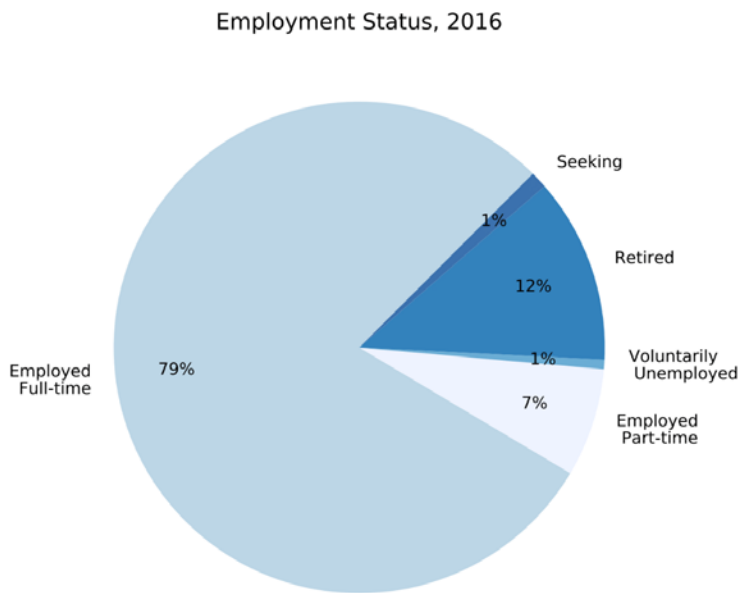


Figure 5: Employment Type, US AAS Members 2016

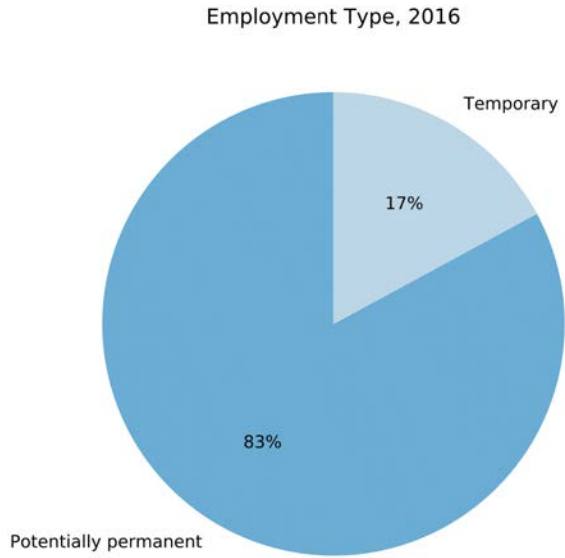


Figure 6: Current Employer, US AAS Members, 2016

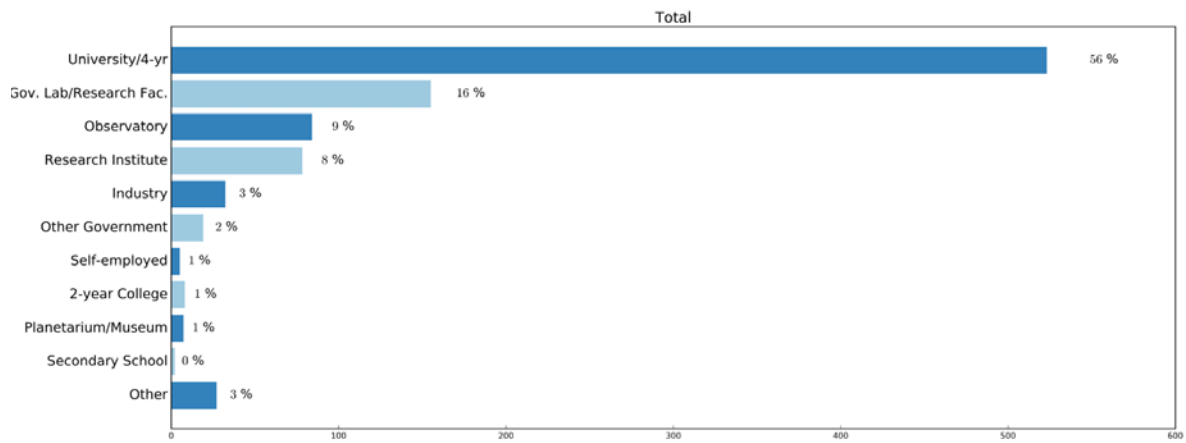


Figure 7: Desired Employers of Current Postdocs and Current Employers of Former Postdocs, US AAS Members, 2016

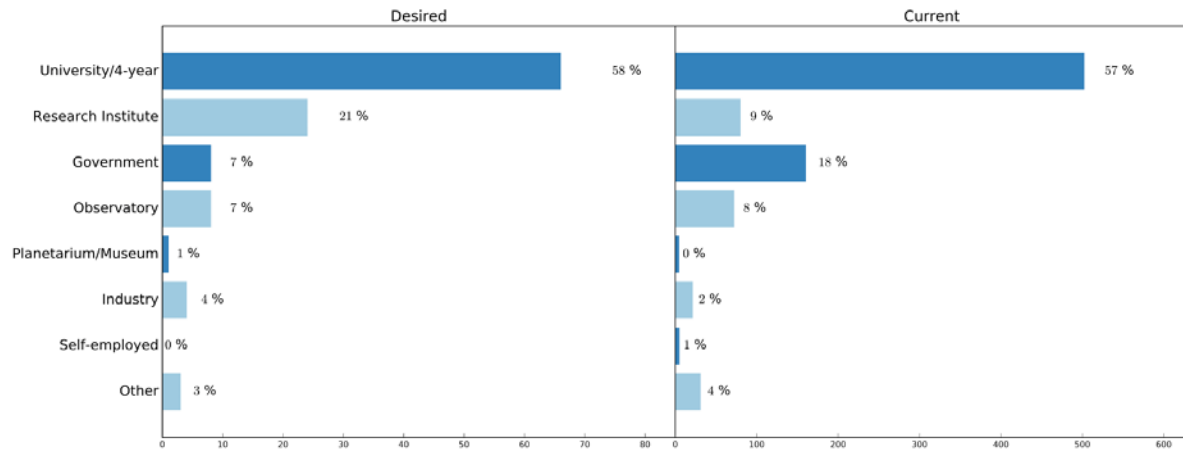


Figure 8: Postdoc Experience by Employer, US AAS Members, 2016

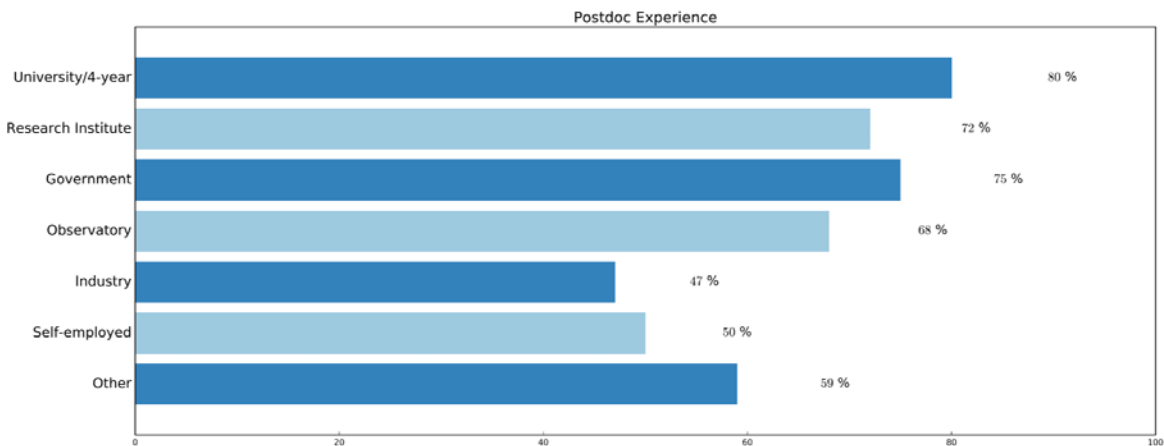


Figure 9: Primary Areas of Interest, Overall and by Gender, US AAS Members, 2016

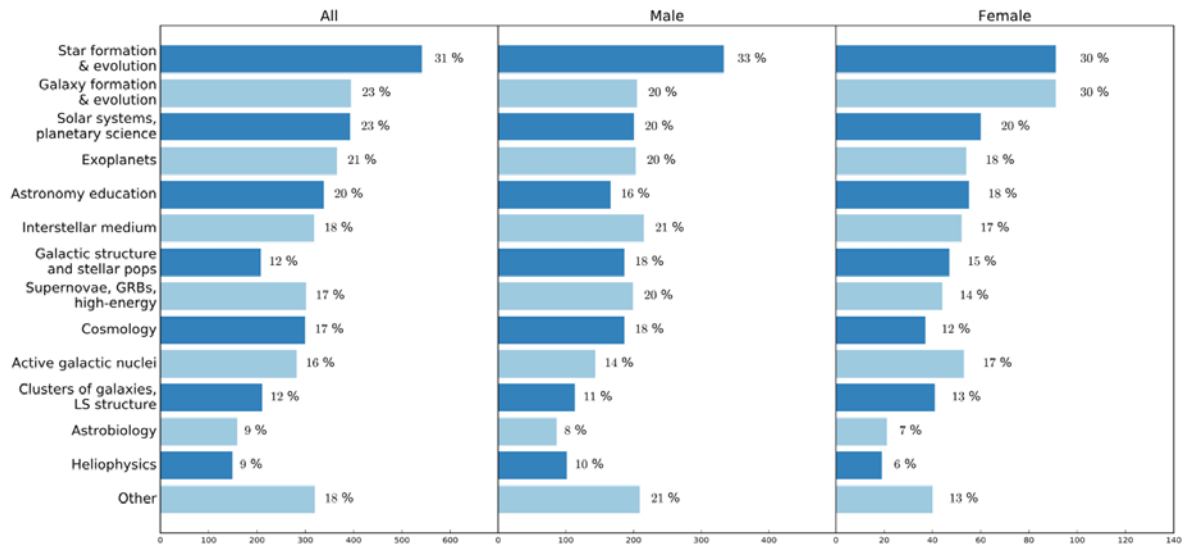


Figure 10: Funding Sources for Salaries, US AAS Members, 2016

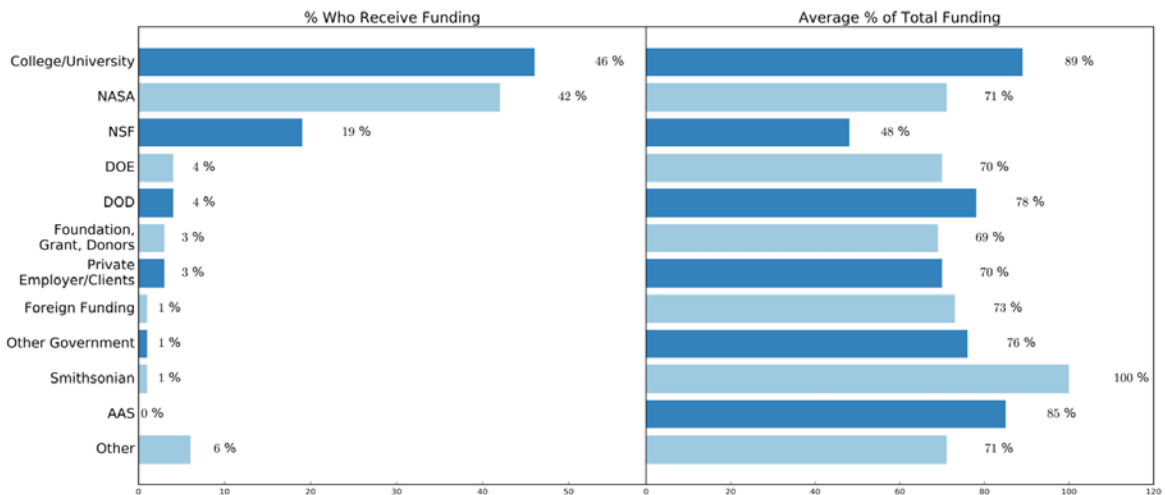


Figure 11: Funding Sources for Research and Education Projects, US AAS Members, 2016

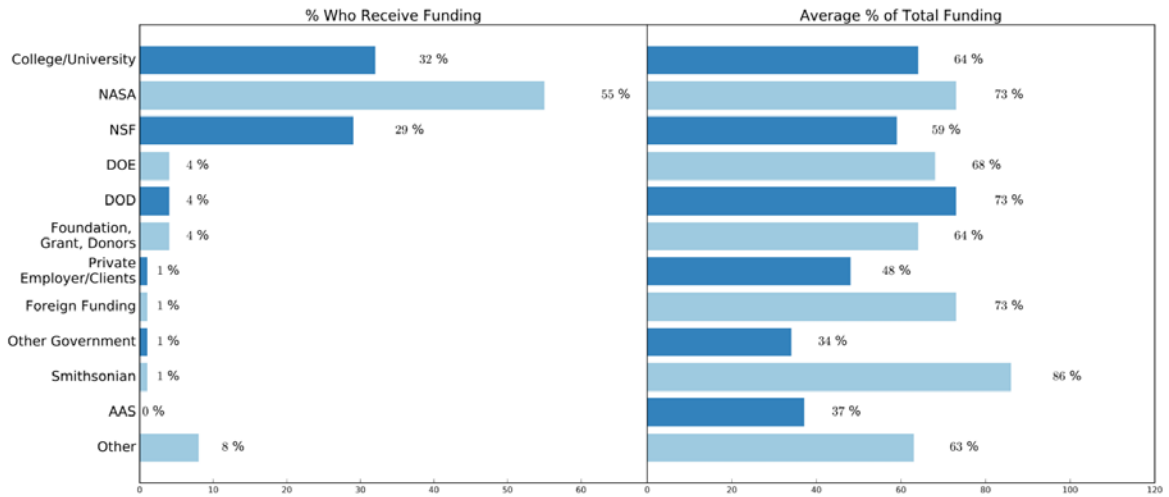


Figure 12: Gender of AAS Members, 2016

Gender of AAS Members, 2016

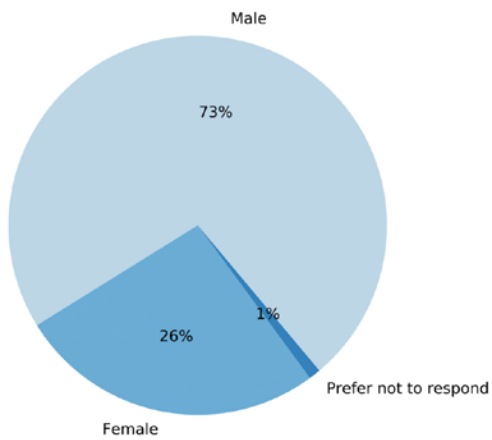
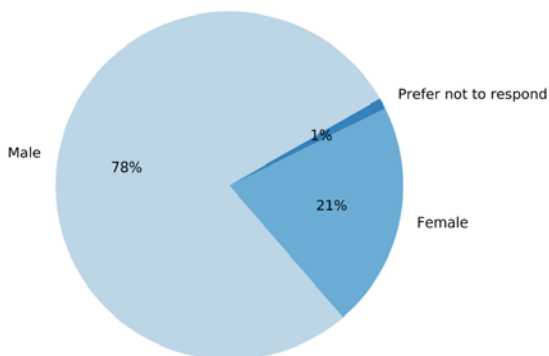


Figure 13: Gender of AAS Members by Year Born, 2016

Gender of AAS Members Born Before 1983



Gender of AAS Members Born After 1983

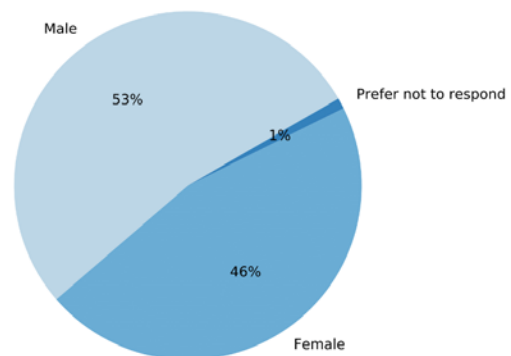


Figure 14: Married or Partnership Status, US AAS Members, 2016

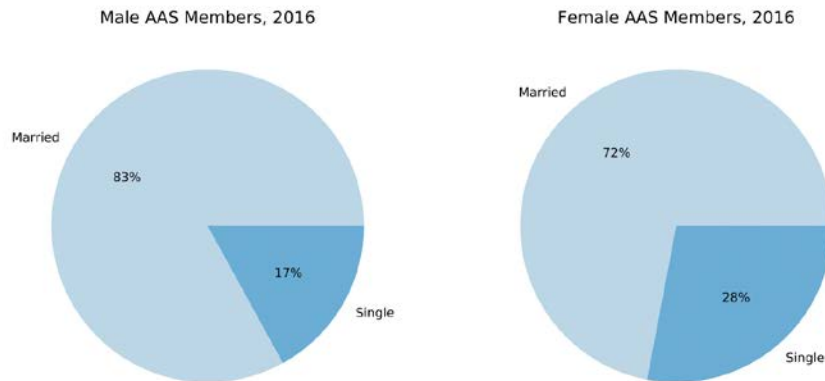


Figure 15: Married or Partnership Status of US AAS Members by Year Born, 2016

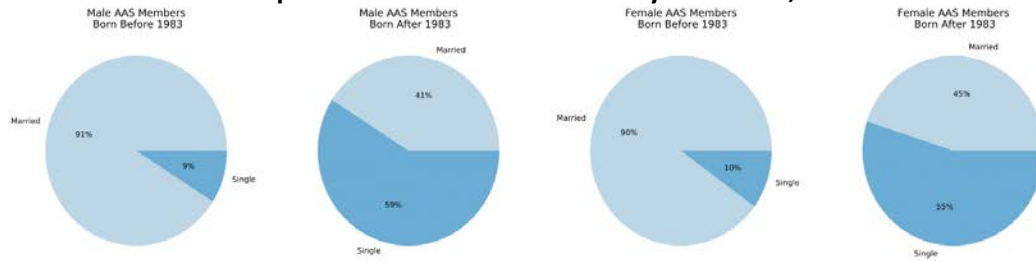


Figure 16: Children for US AAS Members by Sex, 2016

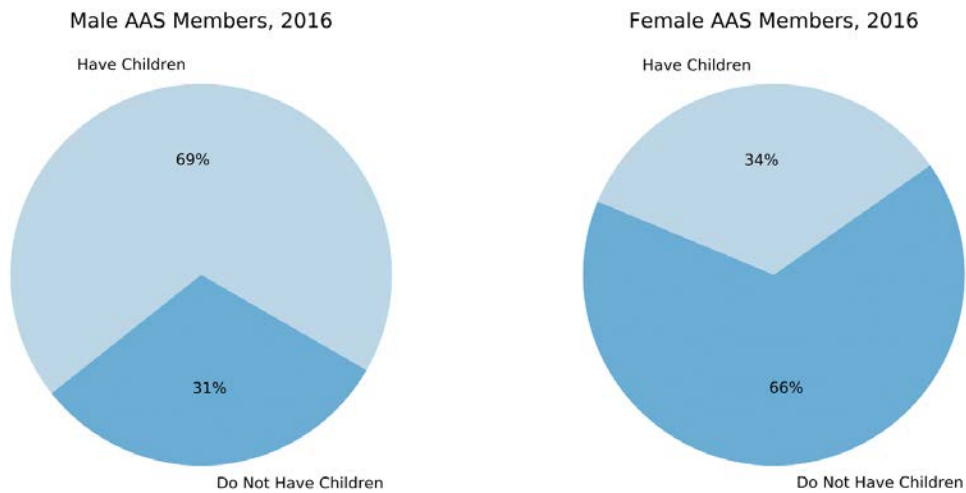


Figure 17: Children for US AAS Members by Sex and Year Born, 2016

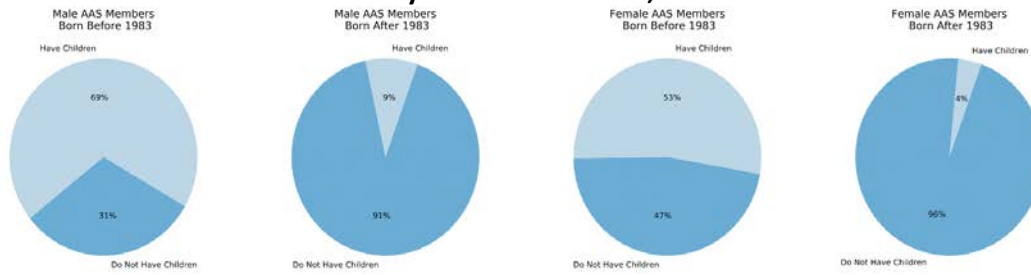


Figure 18: Disabilities among US AAS Members, 2016

Disabilities among US AAS Members, 2016

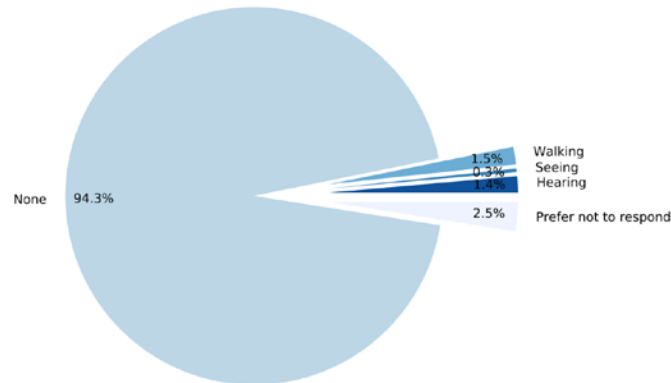


Figure 19: Ethnicities of US AAS Members, 2016, and Ethnicity of US Population, 2010

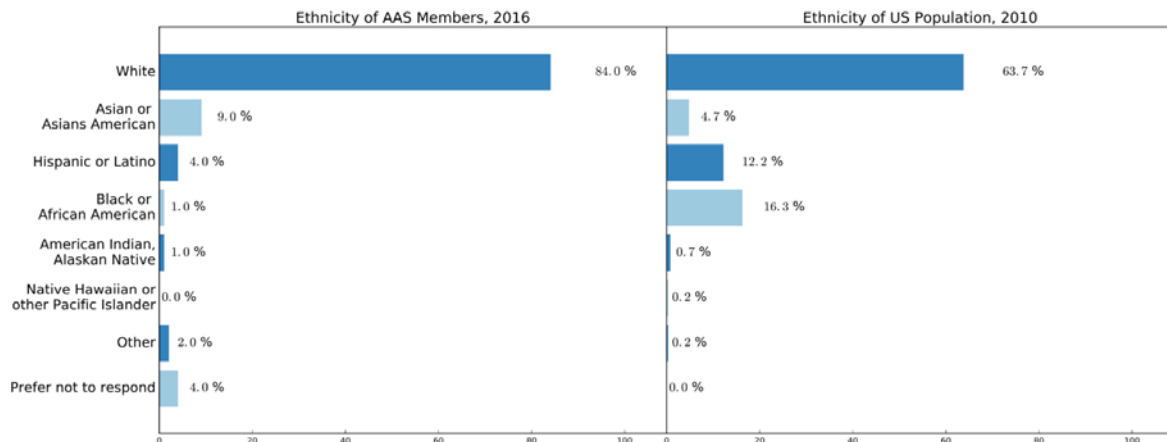


Figure 20: Sexual Orientation and Transgender Status, US AAS Members, 2016

Sexual Orientation and Transgender Status
Among US AAS Members, 2016

