

Annual Report on the Committee on the Status of Women in Astronomy (CSWA) for 2018-2019

By Patricia Knezek (pknezek@gmail.com) & the entire CSWA

The members of the 2018-2019 CSWA are:

Heather Flewelling (University of Hawaii)

David Grinspoon (Planetary Science Institute)

Patricia Knezek (in her personal capacity), Chair

JoEllen McBride (in her personal capacity)

Jessica Mink (Harvard-Smithsonian Center for Astrophysics)

Nancy D. Morrison (University of Toledo, retired)

Alice Olmstead (Texas State University)

Maria Patterson (University of Washington)

Christina Richey (NASA Jet Propulsion Laboratory)

Gregory Rudnick (University of Kansas)

Angela Speck (University of Missouri)

Cristina Thomas (Northern Arizona University)

Sarah Tuttle (University of Washington)

Aparna Venkatesan (University of San Francisco)

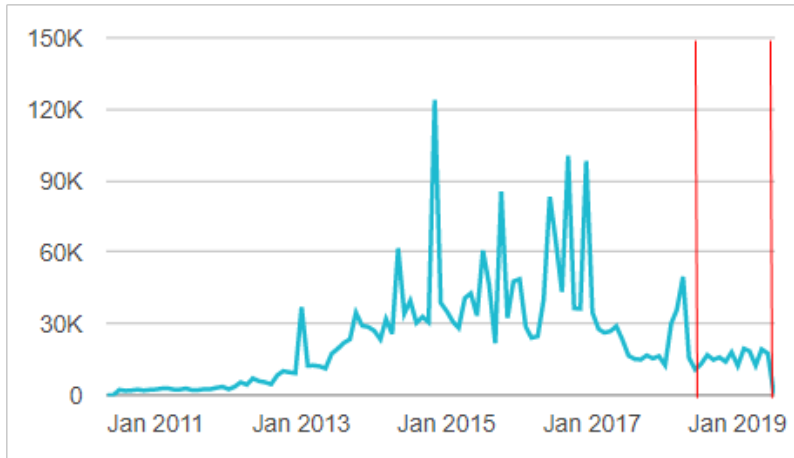
Nicolle Zellner (Albion College)

1. Overview

The Committee on the Status of Women in Astronomy was established in 1979 with the charge to recommend to the Council practical measures that the AAS can take to improve the status of women in astronomy and encourage their entry into this field. This Annual Report will focus on CSWA activity from June 16, 2018 to June 15th, 2019. We note, however, that the CSWA is preparing two white papers for submission to the Activities, Projects, or State of the Profession Consideration (APC) call from the Decadal Survey on Astronomy and Astrophysics (Astro2020), taking the period we're discussing into July 2019. Cristina Thomas, Sarah Tuttle, Aparna Venkatesan, and Nancy Morrison will be completing their terms in July, 2019. In addition, David Grinspoon and Alice Olmstead have decided to roll off early due to other commitments. Nicolle Zellner will be serving another term as the newly Board approved co-chair, and Nancy Morrison will be continuing as the Board liaison.

2. Women in Astronomy Blogspot

The CSWA maintains a Women in Astronomy blog (<http://womeninastronomy.blogspot.com/>). Over the past year, we published 100 blog posts, 34 with original content in addition to cross posts from other sources and the weekly *AASWomen* newsletter. The blog averaged around 15,000 views per month. Unlike previous years the present one has seen no spikes in views. The reporting period falls between the two red lines in the following figure.



Cristina Thomas, the Blogger in Chief during the period, cross posted many items from the Women in Planetary Science blog and from other sources. The CSWA also coordinated with the other diversity committees (SGMA, CSMA) to blog about diversity and inclusion events and People of Color presenting at the AAS meetings. We also promoted both the Astro2020 Decadal Survey and our CSWA survey on the blog to maximize community input.

Many of our older posts are still bringing traffic to the site, as shown in the following figure. These posts cover the topics of harassment (both gender and sexual), sexism, and gender identities mostly. There are two popular posts that cover privilege and mental health as well. The harassment posts are most likely getting hits because of the #metoo movement, but there is not a breakdown of traffic by month for individual posts to confirm.

Posts

Entry	Pageviews
It's Not About That Damn Shirt Nov 20, 2014, 60 comments	94297
"First" Impressions Sep 19, 2016	67149
Guest Post: Understanding Gender ... Oct 3, 2016	50094
Fed Up With Sexual Harassment: T... May 14, 2014, 22 comments	47355
Where Are We on Harassment? Apr 3, 2018	37256
Unreported Sexual Harassment at ... Jul 6, 2015, 12 comments	31534
Stop Interrupting Me: Gender, Conv... Jul 2, 2014, 8 comments	27041
Astronomer Privilege Jun 1, 2016	25251
Obscene Phone Calls and Emails Aug 5, 2015, 47 comments	18314
Autism Isn't the Problem Mar 13, 2018	16852

Most of our traffic comes from Google and Facebook, highlighting the importance of promoting our posts on social media. We started adding photos to the blog posts so that a picture shows up on the automatic Facebook post. The cover photo increases the likelihood of interaction with the Facebook post and reads for the article. Our website is one of the top results in Google searches for 'women in astronomy' and 'women in astronomy blog', which shows the relevance of the blog.

Our audience is mostly US based but we see traffic from Russia, Canada, UK, Germany, and France, which shows that our topics are resonating with astronomers worldwide.

JoEllen McBride took over the Blogger in Chief role in May 2019 and plans to continue promoting posts on diversity and inclusion, and highlighting astronomers and other scientists from underrepresented groups.

3. *AASWomen* weekly newsletter

The CSWA publishes a weekly email newsletter called *AASWomen*. In 2018-2019, the regular editors were Nicolle Zellner (lead), Heather Flewelling, Maria Patterson, and JoEllen McBride. Alessandra Aloisi served multiple times as a guest editor.

A typical *AASWomen* newsletter issue contains cross-posts of commentaries at the CSWA's website Women in Astronomy (womeninastronomy.blogspot.com) and information about AAS special sessions including CSWA events at AAS meetings. It also contains contributions from the community, including requests for and responses to information and/or advice; links to news items about women in science; announcements of honors and awards given to women in science; information about upcoming programs and meetings; proposed bills or policy changes affecting women in science; and links to internship and job opportunities. Some of the items included this year are

- research and news on gender studies, including sexual harassment and other actions that can lead to loss of female talent in STEM;
- news stories on women who have been recognized for their outstanding research (and other) contributions to advancing STEM;
- surveys to assess community opinions; and
- articles about historical women who have contributed to our understanding of astronomical topics (e.g., Antonia Maury)

The newsletter is cross-posted on the Women in Astronomy blog site as well as on the CSWA Facebook page and Twitter. As of May 2019, the *AASWomen* newsletter increased its readership to 1585, growing by about 4% since October 2017. The AAS decision to migrate its mailing lists to Mailman negatively affected the distribution of *AASWomen* for several months, resulting in missed communications and lost subscriptions. It appears that most (if not all) of the issues have been resolved. The archive to the newsletter can be found at <https://cswa.aas.org/AASWOMEN.html>

4. *Status*

The CSWA has provisionally decided to retire *Status*. Because of lack of material, no issue had been published since January, 2016. Some shorter, less formal articles that formerly were published in *Status* are now appearing in the Women in Astronomy blog. The CSWA plans to arrange for publication of longer, more scholarly articles in the *Bulletin of the AAS (BAAS)* now that it is again available for this purpose.

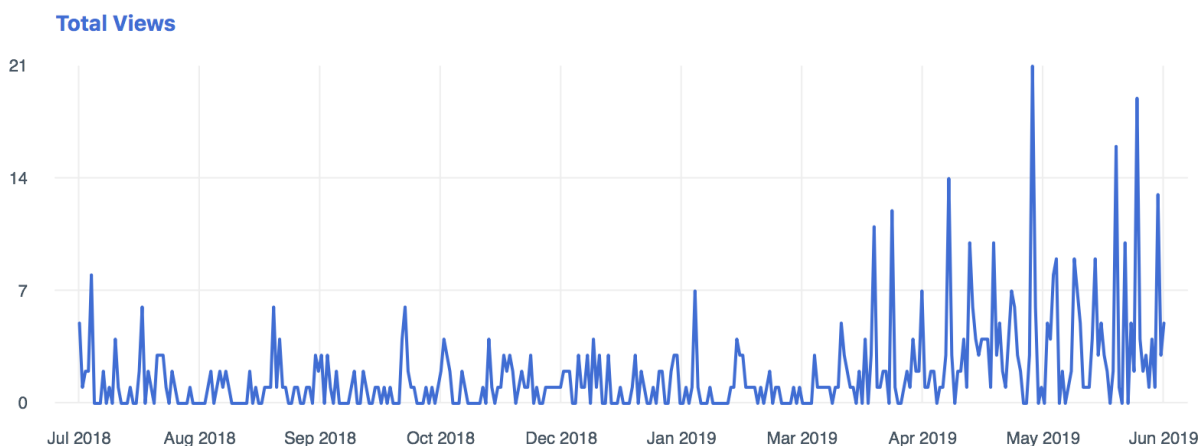
5. CSWA web pages

The structure of the web pages is essentially unchanged. Resource pages are updated from time to time. We are hoping to revise the web site in the coming year, as we finalize our new strategic plan (see Section 12: Path Forward in 2019-2020).

6. Facebook & Twitter

As of 7 July 2019, the CSWA Twitter account, @AAS_Women, has nearly 2,000 followers. Most tweets are shares of links to news articles, including those mentioned in *AASWomen*.

The CSWA Facebook page has more than 1,850 followers. The following figure shows the total number of times per week that someone viewed this page. Clearly, activity has picked up since March, 2019. The number of people viewing the page also increased during that time frame, but not as dramatically as the number of views; thus, those engaged became even more engaged. Logically enough, this time frame corresponds to a resumption of frequent posting.



The following table lists the posts since March 2019 with the greatest reach. In Facebook's terminology, "reach" is an estimate of the number of times the post has appeared on a user's screen.

The Most Popular Facebook Posts Since 2019 March

Date Published	Post	Reach	Reactions, comments, shares
03/21/2019	Women in Observatory Blog	1000	43
04/04/2019	Cross-post: Guide to Organizing Inclusive Scientific Meetings	624	10
04/26/2019	AASWomen Newsletter for April 26, 2019	665	62
05/02/2019	Cross-post: In lopsided vote, U.S. science academy backs move to eject sexual harassers	646	21
05/23/2019	Taking Over the Reigns of the Women in Astronomy Blog	547	8
05/30/2019	Maunakea Gender Equity and Inclusion Survey	466	13
06/13/2019	Interview with Dr. Enrico Ramirez-Ruiz, Vera Rubin Presidential Chair for Diversity in Astronomy at UC Santa Cruz	455	17
06/19/2019	Crosspost: Symposium in Honor of the Legacy of Vera Rubin	516	8

7. CSWA Survey and Decadal Survey Preparation

During 2018 the Committee on the Status of Women in Astronomy (CSWA) began an effort to gather information about what are seen by our communities as the areas of key importance beyond scientific research that the AAS, its divisions, and its relevant committees (including the CSWA itself) should focus on as we move into the 2020s. The goal has been to use this information to (1) develop one or more white papers that will be submitted to the Decadal Survey as a part of the call for papers on an activity, project, or state of the profession consideration (APC) and to (2) develop a new strategic plan for the CSWA for the 2020s, which could include recommendations for actions by the AAS and/or its divisions.

Our strategy was to first identify the key areas and potential activities that could be undertaken in these areas by the AAS, its divisions, or relevant committees. This work began with information gathering in the form of four special sessions at AAS meetings.

At the 231st Meeting of the AAS, held in Washington, DC, January 8-12, 2018, the CSWA sponsored two events, both on Thursday, January 11:

- A special session from 2:00 - 3:30 p.m., entitled "The AAS Committee on the Status of Women: Then and Now and Where Do We Go from Here?"
- The second CSWA Meet & Greet, from 6:30 to 7:30 p.m. We used the input from our earlier special session to continue discussions on the priority issues for CSWA in the 2020s.

At the 232nd Meeting of the AAS, held in Denver, Colorado, June 3-7, 2018, the CSWA continued its preparations for the upcoming Decadal Survey, holding two evening splinter sessions:

- CSWA Priorities in the 2020's: Monday June 4, 6 - 7:30 p.m.; and
- CSWA's Drafting 'State of the Profession' White Papers: Tuesday June 5, 6 - 7:30 p.m.

The information gathered from these events was used to create a survey for the members of the communities that the AAS and its divisions serve, to tell us which of the many activities and ideas that were brought to our attention at the above sessions the community thought were most important/impactful and tell us about anything we missed. The survey was organized around four key areas: Harassment and Bullying; Creating Inclusive Environments; Professional Development, Hiring, and Retention; and Professional Ethics, and also provided an opportunity to provide additional feedback and suggestions. The survey included 53 Likert-scale questions that allowed astronomers to rate the effectiveness of policy actions that could be undertaken by relevant stakeholders and 17 free response opportunities that respondents used to explain their opinions and draw attention to the issues that are important to them.

The CSWA made the survey completely confidential and anonymous – we did not gather any personally identifiable information, nor did we capture any information on who accessed the survey. We made this decision because we recognized that some of our community – especially those who may be at the intersection of two or more minority identities – may have concerns about being individually identifiable. While we acknowledge the weakness of being unable to categorize our respondents' opinions by demographics, we believed the anonymous nature of the survey increased astronomers' willingness to take the survey and write candid responses. The survey was open from Wednesday, February 20 through Friday, May 10, 2019. We extended the deadline twice at the request of community members. A total of 342 responses were received, and the open-ended questions had an average of 50 responses each.

Currently, analysis of the survey results is underway. This effort is being led by Rachel Wexler, a rising senior from the Georgia Institute of Technology, who is doing a summer internship at

NASA Headquarters working with Pat Knezek. The first focus has been on outcomes that naturally lead to recommended actions for federal funding agencies. This has resulted in the drafting of two white papers, one entitled “Findings and Recommendations from the American Astronomical Society (AAS) Committee on the Status of Women in Astronomy: Towards Eliminating Harassment in Astronomy,” and the other entitled “Findings and Recommendations from the American Astronomical Society (AAS) Committee on the Status of Women in Astronomy: Advancing the Career Development of Women in Astronomy.” These are on track to be submitted to the call for to the Astronomy and Astrophysics Community for Activity, Project, and Statement of the Profession Consideration (APC) White Papers, which are due July 10, 2019.

After submission of the white papers, a more detailed analysis of the survey will be undertaken (see Section 12: Path Forward in 2019-2020).

8. Survey on Workplace Climate

As reported in previous years, the CSWA Survey on Workplace Climate was designed to provide information regarding how many in the astronomical community encounter negative language, or experience verbal or physical harassment on the basis of gender, gender identity, sexual orientation, ability status, or race and ethnicity. The survey was designed to request the same information at different stages in a respondent's career in order to understand whether astronomers encounter increased or varying types of harassment over time. For details about the survey itself, see last year's report.

The workplace climate survey work began in 2015 and has led to several high-level plenary speeches (including at the Division for Planetary Sciences Conference, the Conference for Undergraduate Women in Physics, The AAS Winter Meeting, and most recently the American Geophysical Union's (AGU) TESS conference), as well as a highly publicized AGU Journal of Geophysics Research-Planets article (Clancy, Lee, Rodgers & Richey 2017: see press release with link to paper: <https://news.agu.org/press-release/new-survey-highlights-gender-racial-harassment-in-astronomy-and-planetary-science/>).

The first publication focused on the impact of harassment on women of color within the fields of planetary science and astronomy, finding that women of color are especially at risk for all types of harassment (including assault) and hostile workplace experiences compared with white women and men of color. Four more publications are in preparation or review : (1) Understanding the workplace climate issues for LGBT+ respondents to the survey (currently in the review process, to be published with BAAS this summer); (2) Understanding the impact of ableism on those with disabilities; (3) A paper that will include interviews with community members who took the original survey and will address a general sense of being (e.g. feeling safe, awareness of issues in one's own department, how to handle issues when they arise, etc.) and (4) A paper on the respondents' understanding of the policies and procedures designed to improve workplace climate and to properly document and report workplace climate issues such as harassment.

The AAS has already provided key funding for continuation of the interviewing of the survey respondents in order to properly reach saturation. AAS and AGU journals have offered the team free, open access publications that undergo rigorous peer review, with a preference to be given to the AAS as the main funding body of the work. The research team consists of CSWA Member Christina Richey at JPL, as well as Erica Rodgers (from the Space Sciences Institute and stationed in the Chief Technologist office at NASA Headquarters), Kathryn Clancy (from the University of Illinois Urbana-Champaign, where all 4 team members have received Institutional Review Board Training and Certification), and Katharine M. Lee (also from UIUC, who is using this data set as one component of her PhD Studies in the field of Anthropology). Christina Richey recently won a JPL Raise the Bar award to fund her time working on this project.

9. Meeting Activities

The 232nd Meeting of the American Astronomical Society

As reported last year, the CSWA and CSMA sponsored a special session on Indigenous Knowledge (IK) in 21st Century Science at AAS 232 in Denver, Colorado, in June 2018. Some of the IK presentation slides are [available here](#), from speakers Dr. Nancy Maryboy (Indigenous Education Institute, and University of Washington), Dr. David Begay (Indigenous Education Institute, and University of New Mexico), Dr. Isabel Hawkins (San Francisco Exploratorium), and Ka'iu Kimura (Imiloa Astronomy Center of Hawai'i). The session was dedicated to, and honored, Paul Coleman, who passed in January 2018. Paul was the first Native Hawai'ian to receive his doctorate in astrophysics.

The 233rd Meeting of the American Astronomical Society

The 233rd Meeting of the AAS was held in Seattle, Washington, January 6-10, 2019. The CSWA had a table at the undergraduate reception, which was well attended. We had a poster and the "Meet the CSWA" slideshow that ran continuously. The CSWA sponsored one event there on Wednesday, January 11, a CSWA Meet & Greet. It was held from 6:00 to 7:00 p.m. Unfortunately, it was scheduled against the Decadal Survey Town Hall and the wrong room was listed in the program, so attendance was low.

The 234th Meeting of the American Astronomical Society

The 234th Meeting of the AAS was held in St. Louis, Missouri, June 9-13, 2019. The CSWA had a table at the undergraduate reception, which was well attended. We created a flyer with a list of key activities and a QR code to our website and handed it out. We also had sign up slips for those interested in learning more about the CSWA. Finally, the "Meet the CSWA" slideshow ran continuously at our table. The CSWA sponsored one event at the meeting on Wednesday, June 12, a CSWA Meet & Greet. It was held in Midway 7&8 from 6:30 to 7:30 p.m. We reported out some preliminary results from the CSWA Survey and then had a lively discussion about those results. There were ~25-30 attendees.

10. CSWA Sponsorship

As reported last year, the CSWA also supported AAS sponsorship of the Maria Mitchell 2018 Women in Science Symposium. That Symposium was held in Wellesley, MA, Oct. 6-7, 2018,

see <https://www.mmwiss.org>. CSWA members Nancy Morrison, Jessica Mink, and Nicolle Zellner attended the meeting and presented a poster about the CSWA.

Because we have been seeing an increase in the number of sponsorship requests, we decided to develop a policy for the CSWA for endorsement of meetings, special sessions, etc. This policy is in development.

11. Cross-Over with other Committees and Task Forces

We made significant efforts across AAS diversity committees in order to reach those with multiple minority/intersectional identities, a key “ask” from our CSWA 2020s priorities survey respondents and a key recommendation in our two Astro2020 white papers, as discussed in section 7. See also earlier points on cross-committee efforts on multiple fronts such as co-sponsored AAS activities and special sessions. Current liaisons to the other diversity groups are Aparna Venkatesan (CSMA), Sarah Tuttle (WGAD), and Jessica Mink (SGMA).

2018 AAS Task Force on Diversity and Inclusion in Astronomy Graduate Education

CSWA member Angela Speck served as the CSWA representative to the 2018 AAS Task Force on Diversity and Inclusion in Astronomy Graduate Education (see: <https://aas.org/comms/task-force-diversity-and-inclusion-graduate-astronomy-education>). This Task Force delivered its final report and the AAS Board of Trustees voted to endorse it. The Task Force presented its findings at a plenary held at the AAS 233rd meeting in Seattle.

Code of Ethics Committee

The charge to this committee is to promote a high level of ethical conduct by astronomers through development and sponsorship of educational activities for AAS members and other astronomers; to oversee the investigation of complaints concerning possibly unethical conduct of AAS members, attendees of AAS-sponsored meetings, and users of AAS-sponsored services; and to supervise mediation or recommend sanctions when a violation of the Code is found to have occurred (see: <https://aas.org/comms/ethics>). For the past year, CSWA member Angela Speck has chaired this committee.

Physics & Astronomy SEA Change working group

The American Association for the Advancement of Science (AAAS) has developed the STEM Equity Achievement (SEA) Change initiative, which supports institutional transformation in support of diversity and inclusion, especially in colleges and universities. SEA Change—a LEED-like self-assessment, metrics, standards, and award program—challenges, supports, and recognizes institutions of higher education and their departments/schools for taking decisive actions to remove systemic, structural barriers for women, blacks, Hispanics, Native Americans, people with disabilities, and others who are marginalized, with a clear aim: to enable the full diversity of talented individuals to pursue, and persist and succeed in, science, technology, engineering, medicine and mathematics (STEM) higher education (at all levels) and academic careers. CSWA members Pat Knezek and Nicolle Zellner, along with AAS Education Committee chair Kim Coble, have been participating in the AIP Physics & Astronomy SEA Change working group, which is focused on developing the infrastructure to enable individual physics and/or

astronomy departments to participate in SEA Change. The group now has developed an AIP Venture Partnership Fund proposal to conduct a Physics and Astronomy SEA Change Departmental Award Pilot.

Ethics Task Force

CSWA chair Pat Knezek is serving on the AAS Strategic Assembly Ethics Task Force, which is charged with collecting and organizing the input regarding the handling of reports of violations of the Code of Ethics and the AAS Harassment Policy, to identify questions for the Board of Trustees, and to identify actions for the Board of Trustees to discuss and enact. This Task Force continues to meet and move forward addressing various issues.

Site Visit Oversight Committee

Nancy Morrison serves on this committee and is its liaison with the CSWA. During the report period, the SVOC developed several policies and procedures documents, the two principal ones of which have been approved by the AAS Board of Trustees and are on the SVOC webpage, [Site Visit Oversight Committee \(SVOC\)](#). As of the end of the report period, the committee is in the second round of consideration of applications to serve on the teams of people that will conduct climate assessment site visits. It is planning to begin site visits in the fall of 2019.

12. Path Forward in 2019-2020

Now that the CSWA has completed its survey, it will be using the results in several ways: (1) developing two white papers recommending actions for federal agencies that will be submitted to the Decadal Survey by the July 10, 2019 deadline (as discussed in section 7); (2) informing recommended actions for the AAS and/or the CSWA to consider moving forward. This will be written up as a paper to BAAS for publication; and (3) guiding the CSWA as it develops its new strategic plan in the coming year.

In addition, the CSWA is drafting a proposal for AAS participation in the AIP's "STEM Equity Achievement Change (SEA Change) Physics & Astronomy Departmental Award Pilot." The plan is to jointly present the proposal to the AAS Board of Trustees in concert with Education Committee and other AAS diversity committees.