



GSFC Sciences and Exploration Directorate Culture and Climate Survey

Mark Clampin, Antti Pulkkinen, Stacey Day
NASA GSFC



Science Contents



- Path to survey.
- Survey process.
- Findings and recommendations.
- Actions.



Science Path to survey

• In 2017, an influential study By Clancy et al. (2017) and the corresponding Race and Gender Harassment in Planetary Science and **Astronomy Seminar titled** "Understanding & Mitigating Bias & Harassment in Science" by Christine Richey and Erica Rodgers sparked a lot of discussion across GSFC, including in the Heliophysics Science Division (HSD).



@AGU PUBLICATIONS

Journal of Geophysical Research: Planets

COMMENTARY

10.1002/2017 JF005256

- Key Points:
 Women of color in this sample of astronomers and planetary scientists experience greater gender and racial harassment than any other group Women of color in this sample report feeling unsafe in their workplace due to gender (40%) and race (28%)
- Women of color and white women in due to feeling unsafe, leading to a loss

Clancy, K. B. H., K. M. N. Lee. E. M. Rodgers, and C. Richey (2017), Double jeopardy in astronomy and assment, J. Geophys, Res. Pignets, 122.

Received 6 JAN 2017 Accepted 8 JUN 2017 Published online 10 JUL 2017

This article was corrected on 12 JUL 2017 and 4 AUG 2017. See the end of

Double jeopardy in astronomy and planetary science: Women of color face greater risks of gendered and racial harassment

Kathryn B. H. Clancy O, Katharine M. N. Lee O, Erica M. Rodgers O, and Christina Richey

¹Department of Anthropology, University of Illinois at Urbana-Champaign, Urbana, Illinois, USA, ²Space Science Instituti Boulder, Colorado, USA, 3 American Astronomical Society Committee on the Status of Women in Astronomy, Washington, District of Columbia, USA

Abstract Women generally, and women of color specifically, have reported hostile workplace experiences in astronomy and related fields for some time. However, little is known of the extent to which individuals in these disciplines experience inappropriate remarks, harassment, and assault. We hypothesized that the multiple marginality of women of color would mean that they would experience a higher frequency of inappropriate remarks, harassment, and assault in the astronomical and planetary science workplace. We conducted an internet-based survey of the workplace experiences of 474 astronomers and planetary scientists between 2011 and 2015 and found support for this hypothesis. In this sample, in nearly every significant finding, women of color experienced the highest rates of negative workplace experiences, including harassment and assault. Further, 40% of women of color reported feeling unsafe in the workplace as a result of their gender or sex, and 28% of women of color reported feeling unsafe as a result of their race. Finally, 18% of women of color, and 12% of white women, skipped professional events because they did not feel safe attending, identifying a significant loss of career opportunities due to a hostile climate. Our results suggest that the astronomy and planetary science community needs to address the experiences of women of color and white women as they move forward in their efforts to create an inclusive workplace for all scientists.

Plain Language Summary Women generally, and women of color specifically, have reported hostile workplace experiences in astronomy and related fields for some time. However, little is known of the extent to which individuals in these disciplines experience inappropriate remarks, harassment, and assault. We conducted an internet-based survey of the workplace experiences of 474 astronomers and planetary scientists between 2011 and 2015. In this sample, in nearly every significant finding, women of color experienced the highest rates of negative workplace experiences, including harassment and assault. Further, women of color reported feeling unsafe in the workplace as a result of their gender or sex 40% of the time, and as a result of their race 28% of the time. Finally, 18% of women of color, and 12% of white women, skipped professional events because they did not feel safe attending, identifying a significant loss of career opportunities due to a hostile climate. Our results suggest that certain community members may be at additional risk of hostile workplace experiences due to their gender, race, or both.

Astronomy and planetary science, as the fields concerned with celestial objects and processes, help shift human attention outward. Gazing at the stars is an accessible introduction to science, one that gets many young children dreaming of being an astronaut, astronomer, or planetary scientist one day. Recent discoveries within these fields have been groundbreaking, from the Laser Interferometer Gravitational-Wave Observatory team's detection of the first gravitational wave [Abbott et al., 2016] to recent discoveries about Pluto [Stern et al., 2015] learned from the New Horizons spacecraft. These important discoveries excite the public and lead to engagement through citizen science projects. For example, amateur astronomers participate in astronomical and planetary science discoveries by mapping the surfaces of the Moon and other planetary bodies [Lehan et al., 2011-2015] observing meteor showers and identifying extrasolar planets

At the same time, the accessibility and inclusive atmosphere within science, including astronomy and planetary science, has been called into question. Science syllabi use gendered language that not only can show women as incompetent but also normalizes masculine behaviors, belief systems, and priorities [Bejerano and Bartosh, 2015). Several studies of Science, Technology, Engineering, and Mathematics (STEM) fields

CLANCY ET AL GENDER, RACE, AND HARASSMENT IN ASTRONOMY



Path to survey



- In 2017, we had several discussion sessions in HSD and invited Rodgers and Richey to attend one of the sessions.
- From these discussions sparked an idea to have a Culture and Climate survey conducted within HSD. The major differences to other annual surveys would be that this time all would be invited to participate the survey.
- Due to their pioneering work on the topic, we contacted Clancy and her University of Illinois team in 2018. From our initial conversations with Clancy et al. and communications with the other GSFC science Divisions, it became clear that we should expand the survey to cover the entire Sciences and Exploration Directorate.
- As often with government, it took a little while to get the contract in place...



Science Survey process



The survey process was as follows:

- <u>Focus groups</u>. The data collected from the focus groups was used to guide the broader survey because it provided significant insight into Goddard as its own unique space. Clancy et al. conducted targeted recruitment for the qualitative focus groups, consisting of 2-6 participants, starting in the summer of 2019.
- <u>Survey preparation</u>. Clancy et al. used the data collected from focus groups to develop a climate survey that was specific to the needs of Goddard. The researchers chose previously validated survey instruments, with some modification to address the context of this workplace.
- <u>Survey</u>. The survey was conducted Jan-Feb 2020 and was administered online through REDCap, an independent, HIPAA certified, secure survey management application. The survey took approximately 35 minutes to complete and employees were allowed to complete the survey as part of their normal workday.
- <u>Final report</u>. Final report was delivered by Clancy et al. in July 2020. Clancy et al. provided numerous briefings across the Directorate July-November 2020.



WORKPLACE CLIMATE SURVEY



THE SURVEY WILL
OPEN
JANUARY 1, 2020
AND WILL RUN FOR
30 DAYS.

STAY TUNED FOR THE LINK!

Sciences and Exploration Directorate is partnering with University of Illinois to conduct a directorate-wide workplace climate survey. This is first-of-a-kind survey that now includes everybody working in the directorate. If you work in code 600 you are invited to fill out the survey to help identify ways to improve our workplace environment for all.

Directorate and senior management of all our four Divisions are enthusiastic about the survey and committed to use the findings for improving our workplace. This is your opportunity to have a direct influence in the process. Please take 15 minutes off your busy schedules and provide your feedback and perspectives.

For any questions about the survey, please contact: Stacey Day (600), stacey.a.day@nasa.gov
Marlo Maddox (670), marlo.m.Maddox@nasa.gov
Antti Pulkkinen (670), antti.a.Pulkkinen@nasa.gov





Confidential

6) Hook forward to another day at

04/07/2020 2:47pm

Раде 3 **Workplace Climate and Culture at Goddard** Page 2 of 11 In this survey we will be asking you a number of questions about your perceptions of the climate of your workplace as well as your direct experiences there. Unless otherwise instructed, please answer all questions about the last 24 months you have worked at Goddard. If you have worked at Goddard fewer than 24 months, consider this survey in the context of the entirety of your experience. Do you feel that the main reference point for your attitude towards and experience of Goddard come from the organization/code to which you are assigned, or the projects upon which you work? Organization/code Projects Please consider all further questions in the context of your selection above. 0 0 3) I often consider leaving my job. 0 0 0 I dream about getting another job that will better suit my needs. 0 0 0 0 0 Strongly Agree disagree nor disagree I am likely to accept another job at the same compensation level should it be offered to me. 0 0 0 0

0

0

0

0

Confidential

Workplace Climate and Culture at Goddard

Page 4

Page 3 of 11

	In the past week					
		Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
)	I have felt emotionally drained from my work.	0	0	0	0	0
)	I have felt used up at the end of the work day.	0	0	0	0	0
)	I have felt fatigued when I get up in the morning and have to face another day on the job.	0	0	0	0	0
0)	Working with people all day was really a strain for me.	0	0	0	0	0
1)	I have felt burned out from my work.	0	0	0	0	0
2)	I have felt frustrated by my job.	0	0	0	0	0
3)	I have felt I'm working too hard on my job.	0	0	0	0	0
4)	Working with people directly put too much stress on me.	0	0	0	0	0
5)	I have felt like I'm at the end of my rope.	0	0	0	0	0

projectredcap.org projectredcap.org REDCap® 04/07/2020 2:47pm



Science Survey findings



The key themes were:

- People want to work at GSFC where one can conduct exciting scientific research.
- Excellence at all costs.
- Unjustified hierarchy.
- Disparities in communication.

Also:

- White majority has a different experience from underrepresented minorities.
- While the survey was anonymous, ~10% did not enter their demographics information.



Survey recommendations



- Work together as an organization to decide your main values.
- Make establishing (and deserving) trust a core goal of your leaders.
- Acknowledge, take ownership of, and address disparities.
- Provide equitable access to leadership and professional education opportunities.
- Establish and assess basic expectations of contracting organizations' treatment of contractors.
- Hire staff for your EO Office for informal, restorative, transformational practices.



Survey recommendations



Remember that measuring the problem is only the first step:

"We are grateful to the Goddard leadership for the opportunity to recruit, collect, and analyze these data. It is an act of courage to peer behind the curtain and suggests a desire to make their workplace better. Remember that you don't need more policy or bureaucracy, you need to do the inner work, the listening, and the gathering of people to get your values in line with the unwritten rules, incentives, and rewards that inadvertently permeate your workplace. You need to recognize the value of the people behind the science, and restore their dignity and respect through changes in climate and policy."







- Conducted Climate survey to assess Code 600 environment
 - What needed to be fixed?
 - Broad scope including contractors.
- Climate Survey: Dissemination of Results to Science Divisions
 - Provided results and a briefing.
 - Asked to identify priorities & actions from survey results.
 - Each Divisions presented priorities and actions to Board of Directors.
- Directorate Listening Sessions conducted throughout pandemic
 - 3 Childcare, 1 Eldercare, 2 APAA, 1 NPP postdoc & 1 Contractor
 - Listening sessions conducted with EEO and DEI facilitators.





Sciences and Exploration (SED) DEI Initiatives: II

- Listening Session Follow-up examples of action taken:
 - Advocacy to SMD for issues raised by Code 600 scientists:
 - SMD introduced extended & rolling proposal deadlines
 - Extension of NPP postdoc durations
 - Met with Procurement several times to discuss contractor and COOP concerns
 - e.g. where to find EAP information
 - Advocated for science collaboration tools e.g. Slack & Zoom app for conferences
- Ongoing weekly \rightarrow bi-weekly open Sessions with Director and Front Office
 - Issues raised are addressed during the meeting or taken as action items
- Code 600 has developed anonymous feedback tool open to all employees





Cience Sciences and Exploration (SED) DEI Initiatives: III

- New directorate award categories: Nominations come from employees
 - Mentoring
 - DEI

Promotion Criteria Review

- Board of Directors reviewed process for best practices and consistency across Directorate
- Held a meeting to share with laboratory -chiefs
- Letter from Director with all information on criteria and process is posted on website
- Each Division has promotion, and within-Grade data for each employee under review

• Diversity in Hiring

- Currently developing Directorate-wide guidelines for improving diversity of candidate pools, following review led by Rita Sambruna
- Plan will employ changes in advertising, and utilize term-hire authorities
- Current plan anticipates rollout of guideline in mid-August







Conflict management:

- Holding the two sessions in July the 20th for supervisors, and 22nd July for all employees on how to handle conflict.
- Organizations that handle conflict (formally and informally) HRO, AHP, EEO, ADR, legal and the OMBUDS, will come and present the process and contacts

PI Diversity

- Hosted three workshops to discuss how to broaden participation in missions through a more diverse cadre of mission principal investigators.
- Identified GSFC and HQ related issues: HQ issues presented to DAR
- Achieved significant increase in PI/DPI diversity over 2 years

Project Scientists

- All Project Scientist positions are advertised and competed
- Code of Conduct Contract created and used for Field Campaign deployments



cience Code 600: DEI Actions V



- Waiting for funding approval for additional Bystander Awareness Training
 - Submitted training requests for bystander awareness training and other leadership training.
 - The Agency has shut down all Agency/Center leadership training to evaluate and redesign programs. Currently there are no agency/Center leadership programs available above the GS 12.
- DEI Town Hall scheduled for this summer
 - Division status presentations & Review of Climate Survey actions
- Directorate representatives sit on Center DEI committees and ERG's
 - Divisions have identified/hired DEI leads
- Implementing new approaches for Leadership opportunities for Early/Mid-Career scientists (Succession planning)