

WVU Department of Physics and Astronomy Department

Climate Survey Report

Prepared by the Diversity, Equity, and Inclusivity Committee

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1. About This Document

This report presents the results of the 2020 WVU Department of Physics and Astronomy Diversity, Equity, and Inclusivity (DEI) Climate Survey. The purpose of the department's climate survey is to collect information, to identify problems and to develop approaches to address them. Moreover, it allows a longitudinal approach to assessing the culture in the department via annual administration of the survey, including an assessment of the impact of new programs or initiatives to address DEI matters in the department.

This document provides the responses to the survey, a brief assessment of them, makes comparisons to the results of the inaugural 2019 Climate Survey (when possible), and makes recommendations for ways in which everyone in the department (faculty, staff, postdocs, students, and leadership) can improve the departmental climate. All of the recommendations are collected in Section 7.

The reason for setting the goal to address matters of DEI are multiple. It is well-established that productivity and success in group efforts are better in diverse teams due to having a broader range of perspectives (e.g., <https://hbr.org/2016/11/why-diverse-teams-are-smarter>). Thus, the pursuit of new knowledge in physics and astronomy, the instruction and training of students, and the service to the community, state, and country, are better in a diverse department. Diversity, as a goal, however, is insufficient. In order to achieve the gains that diversity provides, those from underrepresented groups must be fully included and be treated equitably. In summary, **everyone benefits from diverse, equitable, and inclusive departments, and everyone bears the responsibility of making the department a welcoming place for all to thrive.**

Another goal of the department's climate survey is to catalyze discussion. The climate survey results and recommendations herein are necessarily insufficient to achieve a diverse, equitable, and inclusive departmental environment on their own. The qualitative results and trends should inform other departmental efforts working towards these goals, and can serve as a metric to assess the success or failures of initiatives.

A challenge for this survey is the problem of small number statistics and the degree to which the survey represents an unbiased measurement of the department as a whole. The department typically has approximately 200 people. Given that the representation by underrepresented minorities in physics and astronomy nationwide is quite low, there are unfortunately insufficient numbers of underrepresented minorities to permit a meaningful statistical analysis. Thus, despite the fact that this document does report numerical values, it is crucial to be aware of low statistical significance of quantitative results and put more attention into the qualitative results, *i.e.*, the absolute number of negative or neutral responses and the written comments.

2. Background

The inaugural WVU Department of Physics & Astronomy DEI Climate Survey was implemented and distributed in Spring 2019 as a Google Form online. The 2019 survey and the report summarizing the results is available at <https://physics.wvu.edu/files/d/0d01fa4d-4eb4-41bb-a222-5f66ab723485/2019-06-23-climatesurveypublicsummary.pdf>.

The second annual WVU Department of Physics & Astronomy DEI Climate Survey was given in Spring 2020, also as an online Google Form. The survey is included at the end of this document. The Department Chair sent an email to the department faculty, staff, postdocs, graduate students, and undergraduate students to announce the survey. It was open for two weeks in March 2020.

3. Departmental DEI Efforts in 2019-2020

To provide a baseline for past and future years, the following is a list of DEI activities in the WVU Department of Physics and Astronomy in 2019-2020:

- Annual departmental Title IX training
- Continuation of the DEI Journal Club
- Created the department DEI webpage: (<https://physics.wvu.edu/about/diversity-equity-and-inclusivity>)
- Became an American Physical Society Bridge Program Member Institution
- Continued a “Women in Physics” Listserv and Women’s Lunches
- Hosted planetarium shows for Black History Month and WVU’s Diversity Week centered around the book/movie *Hidden Figures*
- Second year of the “Diversity, Equity, and Inclusivity” committee
- Applied to join the APS IDEA network
- Some students and faculty members hosted the first ever “Conference for Undergraduate Women in Astronomy” (CUWiA; <https://sites.google.com/view/cuwia/home>)
- Applied to APS to host a “Conference for Undergraduate Women in Physics” (CUWiP) for January 2021. The application was reviewed favorably, but we were invited to refine our budget and re-apply for 2022.

4. Changes to the Survey

Between the 2019 survey and the 2020 version, some modifications were made to the survey. These were based on the desire for some additional information and a response to suggestions made for question revisions from the department. These changes were:

- Updated wording to the preamble and the postscript of the survey to ensure respondents are aware of resources available to them.
- For respondents who respond that they have experienced unfair treatment as a result of their identity, a new question “What is the position of the person(s) that treated you unfairly as a result of aspects of your identity?” was added.
- New questions were implemented to gauge participation in DEI activities in the department: “What is your involvement in the DEI activities of the Department?”, “I attend

DEI journal clubs.”, “I read DEI books, journals, and reports on my own.”, and “As a result of the Department's DEI resources and findings (ex: monthly news emails, journal clubs, 2019 Climate Report), what changes have you implemented to try to improve the DEI climate of the department, if any, in the past 12 months?”

5. Analysis of the Survey

The anonymous results of the survey were shared with the DEI committee and a Physics Education Research faculty member in the department. The data were analyzed in aggregate as summarized in the sections that follow.

For each survey question on a Likert scale, the total number of responses and the number of responses for each possible answer is provided, along with the average and the standard deviation (SD). For all questions, the total number of responses for each option are given for the respondents as a whole. For a number of responses, the results are broken down (disaggregated) in particular ways, such as by department position, gender, or race and ethnicity. For such disaggregated data, populations with less than three members are not shown to prevent the identification of respondents in smaller groups. This has an undesirable side effect of not representing the responses from a number of underrepresented minorities. To ensure these results are not lost from the survey results, there are categories introduced for “non-White” and “non-Male” respondents, which gives these groups enough responses to allow them to be reported without identification of the respondents. As a caution, some limitations of this approach are: (a) implicitly framing “White” and “Male” as the norm or standard; (b) the inclusion of Asians in the non-White category even though they are not underrepresented in physics; (c) does not allow for the different experiences of different groups to explicitly be captured in the report; (d) aspects of intersectionality (that some respondents may identify with multiple different identities) are not able to be investigated as well as would be desired. These matters should be kept in mind.

Comparisons between the results of the surveys from different years are necessarily problematic because of the variation of response rates. In places, the analysis provided does include speculative comparisons between years, with caveats about uncertainties clearly stated. An approach to provide insight about the relative importance in differences in response rate between different years of the survey is employed here. In social science research, tests of significance which are only a function of sample size are unreliable. The quantity of interest is the practice effect of a difference; this is characterized by the effect size. To calculate the effect size of the difference between two means, one calculates the difference in the averages divided by the average standard deviation. An effect size of 0.2 is considered small, 0.5 medium, and 0.8 large. The effect size is not provided for every survey question, but there is sufficient information for the reader to calculate it for any question.

For each survey question soliciting a written response, the responses are grouped by theme and summarized. Representative written comments are included, edited lightly to group similar themes and to remove potential personally identifiable information. Some comments were lengthy, which was interpreted as an expression of passion. The original words from these comments were retained in an attempt to preserve that passion. All comments in the survey other than ones like “nothing” or “N/A” were included in the report.

6. Results of the Survey

This section gives the results of the survey, starting with participation and then summarizing results of each of the questions in the survey.

6a. Participation

The following table gives the number of respondents by position, the approximate total number by position in the department, and the approximate response rate by position. As fluctuations of the number in each position may change, these should be interpreted as approximate.

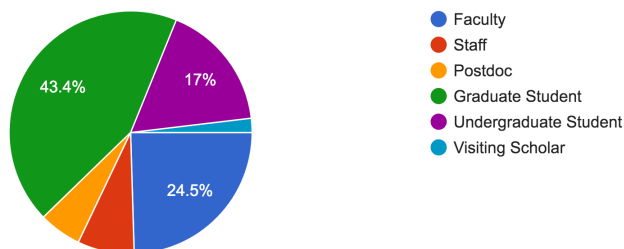
Number of Respondents:

| Participation by Position | Respondents | # Possible | Response Rate |
|---------------------------|-------------|------------|---------------|
| Overall | 55 | 199 | 28% |
| Undergraduates | 9 | 63 | 14% |
| Graduate Students | 23 | 78 | 29% |
| Postdocs | 3 | 18 | 17% |
| Faculty | 13 | 31 | 42% |
| Staff | 4 | 9 | 44% |
| Other/Unreported | 3 | N/A | N/A |

The breakdown of respondents by position is shown in the chart below:

What is your position in the WVU Department of Physics and Astronomy?

53 responses

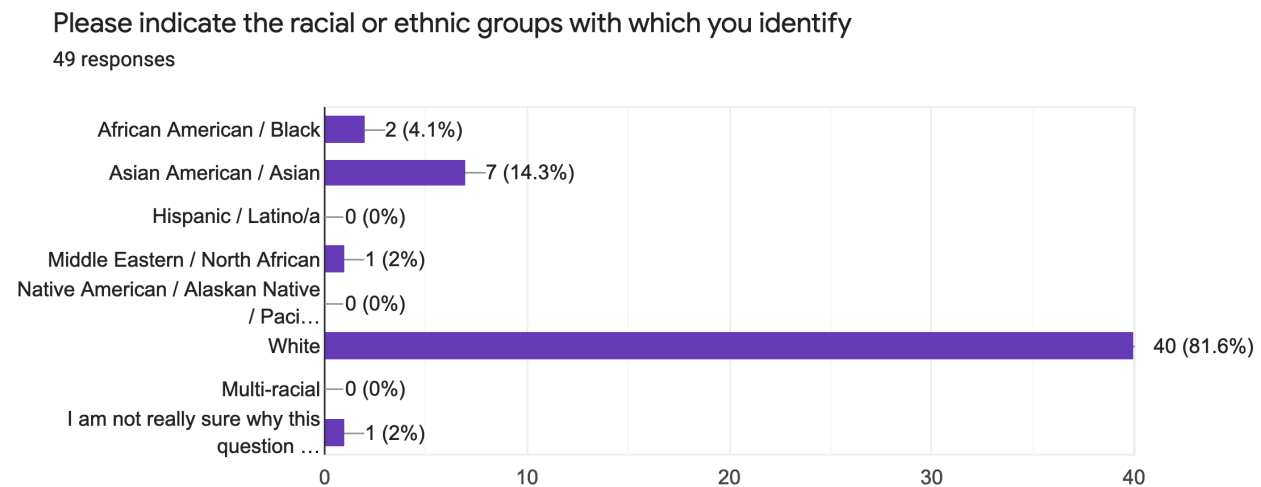


Racial and/Ethnic Breakdown of Respondents:

The following table shows the distribution of the number of respondents by Race/Ethnicity. Note, the totals need not add up to the total number of respondents in each position because respondents may provide multiple responses.

| Race/Ethnicity by Position | White | Non-White | Unreported |
|----------------------------|-------|-----------|------------|
| Overall (57) | 40 | 10 | 7 |
| Undergraduate (9) | 9 | 0 | 0 |
| Grad Student (24) | 16 | 6 | 2 |
| Postdoc (3) | 2 | 1 | 0 |
| Faculty (13) | 10 | 1 | 2 |
| Staff (4) | 3 | 0 | 1 |

The breakdown of race/ethnicity for the respondents overall is shown in the chart below:



Gender Breakdown of Respondents:

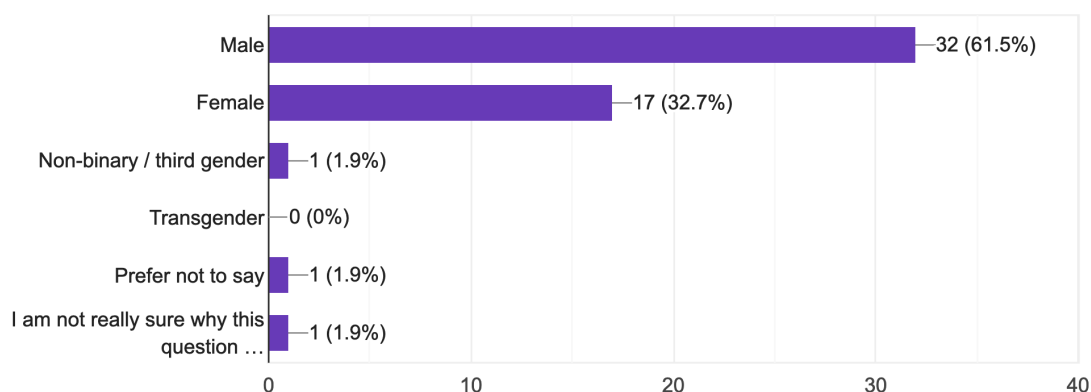
The following table shows the distribution of the number of respondents by gender.

| Gender by Position | Male | Female | Non-binary/Unreported |
|------------------------|------|--------|-----------------------|
| Overall (55) | 32 | 17 | 6 |
| Undergraduates (9) | 6 | 3 | 0 |
| Graduate Students (23) | 17 | 5 | 1 |
| Postdoc (3) | 2 | 1 | 0 |
| Faculty (13) | 6 | 5 | 2 |
| Staff (4) | 1 | 2 | 1 |

The breakdown of gender for the respondents overall is shown in the chart below:

What is your current gender identity?

52 responses



Assessment and Recommendations:

The overall response rate of 28% is quite low. [Typical internal surveys have a 30-40% response rate (<https://peoplepulse.com/resources/useful-articles/survey-response-rates/>)]. In the 2019 departmental climate survey, for comparison, 101 respondents out of 208 department members responded, a rate of 49%. The response rates in 2020 were lower across all titles. There are three likely causes for this: (1) the 2019 response rate was quite high, which could have been because it was the inaugural survey; (2) the timing of the 2020 survey partially overlapped with Spring Break, which likely reduced the response rate; (3) the onset of the COVID-19 coronavirus pandemic shut the school down during the survey period in 2020, which undoubtedly impacted the response rate; and (4) respondents from 2019 could have been dissatisfied with the analysis of the 2019 survey and opted not to participate in 2020. **The precipitous drop in climate survey**

participation means that the results are not likely presenting a comprehensive statistical snapshot of the department. It also presents severe limitations in analyzing the results for 2020 alone and longitudinally, as discussed in Sec. 1.

The difference in response rates between 2019 and 2020 makes it quite possible that the two applications of the survey sampled different populations. For example, it is possible that the 28% responding in this year were the department members most interested in DEI issues, or the department members who had personally experienced feelings of a lack of inclusion or support. In addition, one cannot conclude that the responses to this survey are representative of the department as a whole. For example, the fraction of faculty respondents in 2020 that are females (5/13) significantly exceeds the fraction of the faculty as a whole that are female. Similar can be said of other populations and sub-populations of the department.

Thus, it is important to reiterate that the number of respondents expressing negative or neutral attitudes is much more significant for assessing the climate in the department than the overall averages. Each negative or neutral attitude reflects an individual that the department is not sufficiently supporting in some way.

RECOMMENDATION A1 - Implement approaches to increase participation in the climate survey. Potential approaches could include instituting rewards for students for participating (such as extra credit in classes) and having faculty reinforce the utility of participation in their physics classes and to their research groups. Shifting the survey to the Qualtrics platform, where targeted reminders could be provided, may also improve participation.

RECOMMENDATION A2 – Work towards having the climate survey administered externally rather than by a department committee. External efforts can work to improve the response rate and may get higher response rates if respondents feel more comfortable responding to external surveys. External specialists in DEI surveys are also better trained to analyze surveys than department members. Comments from the department about the climate survey reports from both 2019 and 2020 indicate some dissatisfaction with the in-house analysis. The American Physical Society advises against doing in-house climate surveys; getting external assistance is consistent with best-practices.

6b. Satisfaction with Overall Climate

Respondents were asked “How satisfied are you with the overall climate in the WVU Department of Physics and Astronomy that you have experienced in the past 12 months?” Possible responses were “Very Dissatisfied” = VD, “Dissatisfied” = D, “Neither Satisfied nor Dissatisfied” = N, “Satisfied” = S, or “Very Satisfied” = VS. For the purposes of analysis, these responses were given numerical scores of 1 to 5, respectively, and given below in the order VD = 1, D = 2, N = 3, S = 4, VS = 5.

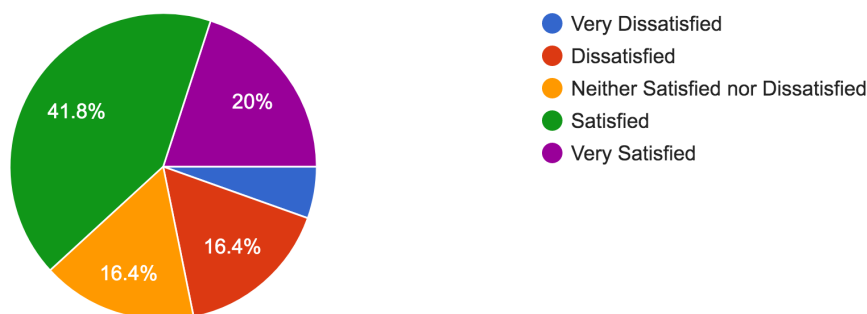
Responses:

| Satisfaction with Overall Climate | VD (1) | D (2) | N (3) | S (4) | VS (5) | Average | SD |
|-----------------------------------|--------|-------|-------|-------|--------|---------|-----|
| Overall (55) | 3 | 9 | 9 | 23 | 11 | 3.5 | 1.2 |
| Undergraduates (9) | 0 | 0 | 2 | 4 | 3 | 4.1 | 0.8 |
| Grad Students (23) | 2 | 6 | 5 | 7 | 3 | 3.1 | 1.2 |
| Postdoc (3) | 0 | 0 | 0 | 1 | 2 | 4.7 | 0.6 |
| Faculty (13) | 1 | 0 | 2 | 8 | 2 | 3.8 | 1.0 |
| Staff (4) | 0 | 0 | 0 | 3 | 1 | 4.3 | 0.5 |
| Male (32) | 1 | 5 | 8 | 13 | 5 | 3.5 | 1.0 |
| Female (17) | 2 | 2 | 1 | 8 | 4 | 3.6 | 1.3 |
| Other/Unreported (6) | 0 | 2 | 0 | 2 | 2 | 3.7 | 1.4 |
| White (40) | 2 | 3 | 6 | 21 | 8 | 3.8 | 1.0 |
| Non-White (9) | 1 | 3 | 3 | 1 | 1 | 2.8 | 1.2 |
| Unreported Race (7) | 0 | 3 | 1 | 1 | 2 | 3.3 | 1.4 |

The overall percentage of each response is given in the following pie chart:

Over the past 12 months, how satisfied have you been with the overall DEI climate in the WVU Department of Physics and Astronomy?

55 responses



Interpretation and Recommendations:

An overall average of 3.5 on a scale of 1 to 5 is above neutral, but only marginally. 62% of respondents (34/55) responded either “Very Satisfied” (VS) or “Satisfied” (S), implying 38% are not satisfied with the overall climate in the department. In particular, 22% of respondents (12/55) responded “Very Dissatisfied” (VD) or “Dissatisfied” (D). *Although a comparison with the 2019 survey is not appropriate due to the difference in response rates*, the average was 3.9 ± 0.9 in 2019 (an effect size of 0.4), with 80% VS or S and 7% VD or D. Despite the significant decrease in the number of respondents from 2019 to 2020, the absolute number of respondents giving VD or D was higher in 2020 than 2019. **One conclusion is that the satisfaction with the overall climate in the department likely dramatically decreased from 2019 to 2020. The other conclusion is that there are significant levels of dissatisfaction with the overall climate in the department.**

All of the subgroups had an average overall satisfaction within one standard deviation of the overall average (3.5 ± 1.2). Interpretations of the various breakdowns follow:

- Position - Satisfaction levels were higher for respondents from the undergraduates, faculty, postdocs, and staff, with the only VD or D score from amongst the faculty. However, the satisfaction level from the graduate student respondents was lower, with an average of 3.1 which is close to neutral. (This average was 3.9 ± 0.8 in 2019, implying a large effect size of 0.8.) More than half the graduate student respondents did not respond VS or S, and 8/23 (35%) responded VD or D. (2/48 = 4% responded VD or D in 2019.) **The data suggest significant levels of dissatisfaction with the overall department climate amongst graduate students.**
- Gender - The satisfaction with the overall department climate of males and females were similar to each other and to the overall rate. The averages for males and females were also comparable to each other in 2019, but they were lower on an absolute level than in 2019 (4.0 ± 0.7 for males, 4.0 ± 1.1 for females). This difference is not statistically significant for the given sample sizes, but that does not mean the decrease should be ignored.

- Race and ethnicity - The average among White respondents was nearly S, comparable to the 2019 result of 4.0 ± 0.7 . In 2019, there was 1 VD or D amongst White respondents, while in 2020 that number jumped to 5. The average among non-White respondents was 2.8, an overall level of dissatisfaction with the department climate. This includes 4/9 (44%) responding VD or D. In 2019, the average was 3.6 ± 1.0 with 3/25 (12%) responding VD or D. **This seems to suggest a significant decrease in satisfaction amongst non-White respondents, and more importantly indicates there is a cohort of non-White students dissatisfied with the overall climate of the department.**
- Sexual orientation - While not shown in the previous table, the average was in line with the overall levels, with a small (not statistically significant) decrease from 2019.
- Disability - While not shown in the previous table, the average was in line with the overall levels, with a small (not statistically significant) decrease from 2019.

While various individual identities have too small a number of respondents to allow a thorough analysis of intersectionality, it should be noted that the dissatisfaction was higher amongst graduate students and non-Whites. This suggests that **it is likely that the negative experiences of non-White graduate students are magnified.**

RECOMMENDATION B1 - Undertake efforts to improve the department climate for graduate students. Potential avenues for this include increased communication with faculty and modes for graduate students to express their concerns. Other approaches are actively being considered by the department, including enhanced graduate student mentoring associated with an application to the APS Bridge program, and the shared leadership approach recommended by the APS-IDEA network.

RECOMMENDATION B2 – Undertake efforts to improve the department climate for non-Whites. Potential avenues for this include the development of a departmental strategy using input from departmental members from all positions. Sample ideas from preliminary discussions on this include increased micro-aggression and implicit bias training, ensuring the department colloquium has representation from a diverse set of speakers, implementing an “Underrepresentation Curriculum” (<https://underrep.com/>) in classes, discussions about racism in academia in the DEI Journal Club (which has already begun), etc.

RECOMMENDATION B3 – Be mindful of intersectionality in efforts to improve the department climate for graduate students and non-Whites. There are aspects of being both a graduate student and non-White that influence experiences. Extra care is recommended to connect non-White students who lack faculty members in the department sharing their experiences to mentors and support systems outside of the department, such as the “100 Black Women at West Virginia University” group at the university (<https://wvuengage.wvu.edu/organization/100bw>) and related programs through national societies and organizations (American Physical Society, National Society of Black Physicists, and the National Society of Hispanic Physicists).

RECOMMENDATION B4 – (Based on respondent comments provided later in the document) Assess department procedures for addressing DEI complaints and accountability for violations. The department should have transparent procedures for receiving and addressing complaints and ensure department members are aware of the procedures.

6c. Feeling of Inclusion By Location

Respondents were asked “In the past 12 months, I have felt accepted and/or included in...” was followed by the options: “Strongly Disagree” = SD = 1, “Disagree” = D = 2, “Neutral” = N = 3, “Agree” = A = 4, “Strongly Agree” = SA = 5, or “Not Applicable”.

Responses (The department overall):

| Feeling of Inclusion in Department Overall | SD (1) | D (2) | N (3) | A (4) | SA (5) | Average | SD |
|--|--------|-------|-------|-------|--------|---------|-----|
| Overall (54) | 0 | 4 | 6 | 22 | 22 | 4.2 | 0.9 |
| Undergraduates (9) | 0 | 0 | 1 | 4 | 4 | 4.3 | 0.7 |
| Grad Students (23) | 0 | 2 | 4 | 12 | 5 | 3.9 | 0.9 |
| Postdoc (3) | 0 | 0 | 0 | 0 | 3 | 5.0 | 0.0 |
| Faculty (13) | 0 | 0 | 1 | 3 | 9 | 4.6 | 0.7 |
| Staff (4) | 0 | 0 | 0 | 3 | 1 | 4.3 | 0.5 |
| Male (32) | 0 | 1 | 4 | 14 | 13 | 4.2 | 0.8 |
| Female (17) | 0 | 2 | 2 | 5 | 8 | 4.1 | 1.1 |
| Other/Unreported (5) | 0 | 1 | 0 | 3 | 1 | 3.8 | 1.1 |
| White (40) | 0 | 0 | 4 | 18 | 18 | 4.4 | 0.7 |
| Non-White (9) | 0 | 2 | 1 | 3 | 3 | 3.8 | 1.2 |
| Unreported Race (6) | 0 | 2 | 1 | 2 | 1 | 3.3 | 1.2 |

Responses (The main office):

| Feeling of Inclusion in the Main Office | SD (1) | D (2) | N (3) | A (4) | SA (5) | Average | SD |
|---|--------|-------|-------|-------|--------|---------|-----|
| Overall (52) | 0 | 1 | 2 | 12 | 37 | 4.6 | 0.7 |

Responses (The undergraduate physics lounge):

| Feeling of Inclusion in the Undergraduate Lounge | SD (1) | D (2) | N (3) | A (4) | SA (5) | Average | SD |
|--|--------|-------|-------|-------|--------|---------|-----|
| Undergraduates (8) | 0 | 1 | 0 | 1 | 6 | 4.5 | 1.1 |

Responses (The TA office):

| Feeling of Inclusion in the TA Office | SD (1) | D (2) | N (3) | A (4) | SA (5) | Average | SD |
|---------------------------------------|--------|-------|-------|-------|--------|---------|-----|
| Grad students (9) | 0 | 0 | 1 | 3 | 5 | 4.4 | 0.7 |

Responses (My physics/astronomy classes):

| Feeling of Inclusion in my Physics/Astronomy Courses | SD (1) | D (2) | N (3) | A (4) | SA (5) | Average | SD |
|--|--------|-------|-------|-------|--------|---------|-----|
| Overall (25) | 0 | 0 | 1 | 3 | 5 | 4.4 | 0.7 |
| Undergraduates (9) | 0 | 0 | 2 | 4 | 3 | 4.1 | 0.8 |
| Grad Students (16) | 0 | 0 | 1 | 6 | 9 | 4.5 | 0.6 |

Responses (My physics/astronomy course labs):

| Feeling of Inclusion in my Physics/Astronomy Course labs | SD (1) | D (2) | N (3) | A (4) | SA (5) | Average | SD |
|--|--------|-------|-------|-------|--------|---------|-----|
| Overall (15) | 0 | 0 | 2 | 5 | 8 | 4.4 | 0.7 |
| Undergraduates (8) | 0 | 0 | 1 | 4 | 3 | 4.3 | 0.7 |
| Grad Students (7) | 0 | 0 | 1 | 1 | 5 | 4.6 | 0.8 |

Responses (My physics/astronomy advisor's office):

| Feeling of Inclusion in my Physics/Astronomy advisor's office | SD (1) | D (2) | N (3) | A (4) | SA (5) | Average | SD |
|---|--------|-------|-------|-------|--------|---------|-----|
| Overall (36) | 2 | 2 | 3 | 10 | 19 | 4.2 | 1.2 |
| Undergraduates (9) | 1 | 1 | 0 | 6 | 1 | 3.6 | 1.2 |
| Grad Students (22) | 1 | 0 | 3 | 3 | 15 | 4.4 | 1.1 |
| Postdoc (3) | 0 | 0 | 0 | 0 | 3 | 5.0 | 0.0 |

Responses (My physics/astronomy research labs):

| Feeling of Inclusion in my Physics/Astronomy research labs | SD (1) | D (2) | N (3) | A (4) | SA (5) | Average | SD |
|--|--------|-------|-------|-------|--------|---------|-----|
| Overall (22) | 0 | 0 | 1 | 7 | 14 | 4.6 | 0.6 |
| Undergraduates (4) | 0 | 0 | 0 | 1 | 3 | 4.8 | 0.5 |
| Grad Students (14) | 0 | 0 | 1 | 6 | 7 | 4.4 | 0.6 |
| Faculty (3) | 0 | 0 | 0 | 0 | 3 | 5.0 | 0.0 |

Responses (Departmental social events):

| Feeling of Inclusion in Department Social Events | SD (1) | D (2) | N (3) | A (4) | SA (5) | Average | SD |
|--|--------|-------|-------|-------|--------|---------|-----|
| Overall (44) | 2 | 1 | 3 | 18 | 20 | 4.2 | 1.0 |
| Undergraduates (5) | 0 | 0 | 1 | 2 | 2 | 4.2 | 0.8 |
| Grad Students (21) | 2 | 1 | 1 | 11 | 6 | 3.9 | 1.2 |
| Faculty (13) | 0 | 0 | 0 | 2 | 8 | 4.8 | 0.4 |
| Male (26) | 2 | 1 | 1 | 10 | 12 | 4.1 | 1.2 |
| Female (14) | 0 | 0 | 1 | 6 | 7 | 4.4 | 0.6 |
| Other/Unreported (4) | 0 | 0 | 1 | 2 | 1 | 4.0 | 0.8 |
| White (33) | 0 | 1 | 2 | 13 | 17 | 4.4 | 0.7 |
| Non-White (8) | 1 | 0 | 0 | 3 | 4 | 4.1 | 1.4 |
| Unreported Race (6) | 1 | 0 | 1 | 2 | 0 | 3.0 | 1.4 |

Responses (Departmental machine shop):

| Feeling of Inclusion in the Departmental machine shop | SD (1) | D (2) | N (3) | A (4) | SA (5) | Average | SD |
|---|--------|-------|-------|-------|--------|---------|-----|
| Overall (19) | 0 | 0 | 3 | 7 | 9 | 4.3 | 0.7 |

Discussion of Written Comments:

Respondents were also asked to elaborate on their answers with the prompt: “Please comment on your level of acceptance and/or inclusion in any WVU Department of Physics and Astronomy settings in the last 12 months.”

There were $20/55 = 36\%$ substantive responses to this question. 12 expressed a generally positive view of their acceptance and/or inclusion, and 2 expressed a generally negative view but did not provide details. Seven other comments are summarized by theme below, edited lightly to remove any potential personally identifiable information:

- One response was that the grad student culture is marked by cliques.
- Two responses were about spaces and opportunities in the department for socializing
 - The department lacks an open area for people to have tea/coffee/lunch together.
 - It is nice that there are women's lunches.
- One response was that it has been difficult to feel like part of the department.
- One respondent did not feel excluded because of race, ethnicity, religion, gender, etc., but because they are a graduate student.
- One respondent said other students have trouble communicating effectively.
- One respondent said there are physics professors that are disrespectful to students in classes, not based on discrimination for race, orientation, etc., but because the professor is incapable or uninterested in connecting with students.

Interpretation and Recommendations:

For the department overall, the average feeling of inclusion of 4.2 ± 0.9 on a scale of 1 to 5 implies agreement. $44/54 = 81\%$ responded either “Strongly Agree” (SA) or “Agree” (A). $4/54 = 7\%$ of respondents responded “Disagree” (D), and no respondent selected “Strongly Disagree” (SD). The average was 4.3 ± 0.8 in 2019 (effect size of 0.1), with $88/99 = 89\%$ SA or A and $3/99 = 3\%$ D or SD. With the caveat about differences in response rates between 2019 and 2020, the results were quite similar. There was an increase in the absolute number of respondents that chose Disagree in 2020. The conclusion is that the average satisfaction with the overall climate was comparable between 2019 to 2020, but there was an increase in the number of respondents that are dissatisfied.

All of the subgroups had an average overall satisfaction within one standard deviation of the overall average (4.2 ± 0.9), but there were groups with scores well below the average. This includes graduate students (3.9 ± 0.9) and non-White respondents (3.8 ± 1.2), with 2 “Disagree” responses from each of these two groups. For particular locations, interpretations follow:

- Main Office - The average feeling of inclusion is quite high, with one D. The average was comparable to 2019, with a lower rate of SD and D responses in 2020 than in 2019.
- Undergraduate Physics Lounge - The average is quite high, slightly higher than 2019 (though the number of respondents is small). The number of SD and D responses was 1, the same as in 2019. Given the low response rates, it is important to recognize that the results do not imply that no portion of the department’s undergraduate population are having issues in the lounge.

- TA Office - The average was quite high, higher than in 2019 (3.7 ± 1.2 with 21 respondents). There were no SD or D among respondents, compared to $3/21 = 14\%$ in 2019. The improved feeling of satisfaction may be real, but the decrease in number of respondents makes this assessment ambiguous. **Feeling of inclusion in the TA office should continue to be tracked in future surveys.**
- My physics/astronomy classes and course labs - The average was above A for both undergraduates and graduate students for each setting. The average in 2019 for each was 4.4 and 4.3, respectively, so the changes are not significant. Two students responded SD or D in 2019, and none in 2020. Again, this may be an actual improvement or the result of the smaller number of respondents.
- My physics/astronomy advisor's office - The overall average was above A, with a small (not statistically significant) decrease from 2019 (4.4 ± 1.0). However, $4/36 = 11\%$ respondents chose SD or D, an increase over the $5/65 = 8\%$ in 2019. Thus, there is a significant subset of students who do not feel their advisor's office is inclusive. **This suggests that the department should be concerned with the experiences of its students in their interactions with their advisor.**
- My physics/astronomy research labs - The averages were quite high and there were no SD or D responses, both improved over 2019. Again, this may be an actual improvement or the result of the smaller number of respondents.
- Departmental social events - The overall average was A, with a comparable average as in 2019 (4.2 ± 0.9). There were $3/44 = 7\%$ with SD or D responses, comparable in rate to the $6/92 = 7\%$ in 2019. The respondents with SD or D responses include non-Whites and graduate students. **The consistency from 2019 to 2020 in these results suggest that measures should be taken to ensure a feeling of inclusion at departmental social events.**
- Departmental machine shop - The average of 4.3 ± 0.7 with 19 respondents was a small (not statistically significant) increase over the 4.0 ± 1.1 result from 2019. There were no responses of SD or D in 2020, compared to 4 in 2019. This may be an actual improvement or the result of the smaller number of respondents.

RECOMMENDATION C1 - Laud and reward the staff in the main office for consistently fostering a welcoming and inclusive main office.

RECOMMENDATION C2 – Undertake efforts to improve the experience of the department's students in their interactions with their advisors. Potential avenues for this include mentorship training and broader efforts in undergraduate advising training.

RECOMMENDATION C3 – Undertake efforts to enhance the feeling of inclusion at departmental social events. Potential avenues for this include adding statements about inclusivity to email announcements about departmental social events, ensuring that social events and activities at departmental events accommodate a broader range of cultures, and gathering information about how social events can be made more inclusive.

6d. Department Descriptors

Respondents were asked “Based on your direct experiences in the last 12 months, select one option on the scale that best represents how you would rate the climate in the WVU Department of Physics and Astronomy.” Responses could range from 1 to 5, with 1 corresponding to the descriptor on the left and 5 corresponding to the descriptor on the right. Results are in the following tables:

Hostile → Friendly

| Hostile → Friendly | 1 | 2 | 3 | 4 | 5 | Average | SD |
|--------------------|---|---|---|----|----|---------|-----|
| Overall (53) | 2 | 6 | 7 | 18 | 20 | 3.9 | 1.1 |
| Non-White (9) | 1 | 4 | 0 | 1 | 3 | 3.1 | 1.6 |
| Non-Male (17) | 1 | 3 | 2 | 4 | 7 | 3.8 | 1.3 |

Racist → Non-Racist

| Racist → Non-racist | 1 | 2 | 3 | 4 | 5 | Average | SD |
|---------------------|---|---|----|----|----|---------|-----|
| Overall (53) | 1 | 5 | 10 | 12 | 25 | 4.0 | 1.1 |
| Non-White (9) | 1 | 1 | 2 | 1 | 4 | 3.7 | 1.5 |

Diverse → Homogeneous

| Diverse → Homogeneous | 1 | 2 | 3 | 4 | 5 | Average | SD |
|-----------------------|----|---|----|----|---|---------|-----|
| Overall (51) | 12 | 5 | 15 | 15 | 4 | 2.9 | 1.3 |
| Non-White (7) | 3 | 0 | 1 | 1 | 2 | 2.9 | 1.9 |
| Non-Male (17) | 7 | 1 | 3 | 4 | 2 | 2.6 | 1.5 |

Sexist → Non-Sexist

| Sexist → Non-Sexist | 1 | 2 | 3 | 4 | 5 | Average | SD |
|---------------------|---|---|----|----|----|---------|-----|
| Overall (52) | 1 | 7 | 11 | 13 | 10 | 3.8 | 1.1 |
| Non-Male (17) | 0 | 4 | 4 | 2 | 6 | 3.6 | 1.3 |

Cooperative → Competitive

| Cooperative → Competitive | 1 | 2 | 3 | 4 | 5 | Average | SD |
|---------------------------|----|----|----|---|---|---------|-----|
| Overall (52) | 15 | 14 | 16 | 4 | 3 | 2.3 | 1.2 |

Homophobic → Non-Homophobic

| Homophobic → Non-Homophobic | 1 | 2 | 3 | 4 | 5 | Average | SD |
|-----------------------------|---|---|---|----|----|---------|-----|
| Overall (51) | 0 | 2 | 6 | 19 | 24 | 4.3 | 0.8 |
| LGBTQ+ (3) | 0 | 0 | 1 | 1 | 1 | 4.0 | 1.0 |

Unsupportive → Supportive

| Unsupportive → Supportive | 1 | 2 | 3 | 4 | 5 | Average | SD |
|---------------------------|---|---|---|----|----|---------|-----|
| Overall (52) | 3 | 6 | 6 | 17 | 20 | 3.9 | 1.2 |

Welcoming → Unwelcoming

| Welcoming → Unwelcoming | 1 | 2 | 3 | 4 | 5 | Average | SD |
|-------------------------|----|----|---|---|---|---------|-----|
| Overall (52) | 20 | 20 | 7 | 3 | 2 | 2.0 | 1.1 |
| Non-White (8) | 4 | 0 | 2 | 1 | 1 | 2.4 | 1.6 |
| Non-Male (17) | 7 | 7 | 2 | 1 | 0 | 1.8 | 0.9 |

Elitist → Non-elitist

| Elitist → Non-elitist | 1 | 2 | 3 | 4 | 5 | Average | SD |
|-----------------------|---|---|----|----|---|---------|-----|
| Overall (52) | 3 | 7 | 22 | 14 | 5 | 3.2 | 1.0 |
| Non-White (8) | 2 | 1 | 2 | 2 | 1 | 2.9 | 1.5 |
| Non-Male (16) | 1 | 0 | 6 | 6 | 3 | 3.6 | 1.0 |

Interpretation and Recommendations:

For particular descriptors, interpretations follow:

- Hostile → Friendly - The average was on the friendly range overall; the average of 3.9 ± 1.1 was slightly lower than the 4.2 ± 0.9 result in 2019. However, there were $8/53 = 15\%$ responding in the hostile range, compared to $5/99 = 5\%$ in 2019. Thus, there appears to have been an increase in a feeling of hostility among respondents between 2019 and 2020. Moreover, in 2019, Non-Whites and Non-Males had an average of 4.2, the same as the overall result. In contrast in 2020, the average for Non-Whites was considerably lower (a neutral 3.1 ± 1.6 average with a large standard deviation indicating very different experiences for respondents), and the number of Non-Males responding that the department is hostile increased from 1 in 2019 to 4 in 2020. **These results suggest a substantial subset of respondents experience a feeling of hostility, especially among those in the non-majority.**
- Racist → Non-Racist - The overall average is Non-Racist, with a small statistically insignificant decrease from 4.2 ± 1.0 in 2019. However, there were $6/53 = 11\%$ responses of Racist, higher than the $7/99 = 7\%$ in 2019. Amongst non-Whites, the average was 3.7, noticeably lower than the 4.2 ± 1.1 in 2019, and $2/9 = 22\%$ of respondents selected Racist. **These results suggest a substantial subset of respondents experience a feeling of racism in the department, especially among non-Whites.**
- Diverse → Homogeneous - The average was in the middle, and did not differ greatly from 2019.
- Sexist → Non-Sexist - The average was in the Non-Sexist range, with averages comparable to 2019. $4/17 = 24\%$ of non-Males responded in the Sexist range, comparable to the $5/20 = 25\%$ in 2019. **These results suggest improvements should be made to address a continuing feeling of sexism amongst a significant portion of non-Male respondents.**
- Cooperative → Competitive - The average was marginally on the Cooperative side of the middle; a statistically insignificant amount more cooperative than the 2.5 ± 1.1 average in 2019.
- Homophobic → Non-Homophobic - Overall, the average response was non-Homophobic. The averages were quite close to the 4.4 ± 0.8 value in 2019. The response from amongst those identifying as LGBTQ+ was non-Homophobic, with the same average of 4.0 as in 2019. There were no responses of Homophobic from amongst the LGBTQ+ respondents in 2020, compared to $1/4 = 25\%$ in 2019. Overall, there was a small change in the percentage of respondents responding negatively (2.0% in 2019, 3.3% in 2020). These trends may represent the result of the smaller number of respondents.
- Unsupportive → Supportive - The overall average was Supportive, but the average of 3.9 was slightly lower than in 2019 (4.2 ± 0.9). There were $9/52 = 17\%$ responses of unsupportive, compared to $6/98 = 6\%$ in 2019. **This suggests that there is a substantial subset of respondents feeling a lack of support from the department.**
- Welcoming → Unwelcoming - The overall average of 2.0 is Welcoming, and is consistent with the 1.9 ± 1.0 from 2019. The results from Non-Males were consistent with the overall results and with the results from 2019 (1.7 ± 0.9). However, the results from Non-Whites were much closer to a neutral average (2.4), which is less welcoming than the results from 2019 (1.9 ± 1.2 with 24 respondents). While the small number statistics make it difficult to

assess, **the results suggest a feeling of being unwelcome amongst Non-Whites is an issue.**

- Elitist → Non-Elitist - The average was consistent with neutral, very slightly on the non-Elitist range. This is a small statistically insignificant decrease relative to the 3.5 ± 1.1 result from 2019. The average among Non-Whites was more Elitist, with a higher proportion of respondents in the Elitist range than the respondents overall.

The above results should also be considered in the lens of intersectionality. Response rates for those in the non-majority noted feelings of racism, sexism, and unwelcomeness. **It is likely that those in the intersection of non-White and non-Male have negative feelings pertaining to multiple aspects of their identity.**

RECOMMENDATION D1 – Undertake efforts to improve the friendliness of the department to those in the non-majority (Non-Whites and Non-Males). Potential avenues for this include increased number of training on issues like microaggressions. However, the National Academies Report “Sexual Harassment of Women Climate, Culture, and Consequences in Academic Sciences, Engineering, and Medicine” suggests trainings must be augmented by other approaches. This should include significant self-reflection and concerted day-to-day effort by all departmental members. The department can encourage this by increasing the level of discussion of matters affecting those in the minority and broadened participation in these activities by those in the majority. This can include creating safe spaces for discussion, a repository of shared resources, and adopting a culture of honest self-reflection.

RECOMMENDATION D2 – Undertake efforts to support members of the department, especially those in the non-majority. Potential avenues for this include the development of a plan to carry this out with significant input from those in the non-majority. Existing resources should be used in such efforts, such as the AIP report “The Time Is Now: Systemic Changes to Increase African Americans with Bachelor’s Degrees in Physics and Astronomy” to improve experiences of Black members in the department, the National Academies Report “Sexual Harassment of Women Climate, Culture, and Consequences in Academic Sciences, Engineering, and Medicine” to improve the experiences of women in the department, and the National Society of Hispanic Physicists and American Association of Physics Teacher “Report on the Conference for Enhancing Undergraduate Physics Programs at Hispanic-Serving Institutions” to improve the experiences of Hispanics in the department.

6e. Statements Concerning DEI in the Department

Respondents were asked “Considering your experiences over the past 12 months, please indicate your level of agreement with each of the following statements.” The allowed responses were 1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Strongly Agree.

| | 1 | 2 | 3 | 4 | 5 | Average | SD |
|--|----|----|----|----|----|---------|-----|
| I feel valued as an individual in the WVU Department of Physics & Astronomy (54) | 4 | 5 | 4 | 27 | 14 | 3.8 | 1.1 |
| I have considered leaving the department because I felt isolated or unwelcomed (54) | 27 | 5 | 10 | 10 | 2 | 2.2 | 1.1 |
| My experience in the department has had a positive influence on my professional growth (54) | 1 | 6 | 11 | 17 | 19 | 3.9 | 1.3 |
| There is too much emphasis put on issues of diversity, equity, and inclusion in the department (54) | 22 | 12 | 12 | 6 | 2 | 2.1 | 1.1 |
| I have to work harder than others to be valued equally here in the department (54) | 17 | 14 | 14 | 4 | 5 | 2.4 | 1.2 |
| I have found one or more communities or groups where I feel I belong in the Department of Physics and Astronomy (54) | 3 | 3 | 7 | 22 | 19 | 3.9 | 0.8 |
| The department provides sufficient resources to foster the success of its members (54) | 4 | 7 | 11 | 16 | 16 | 3.6 | 1.2 |
| I am treated with respect in the department (54) | 3 | 4 | 9 | 17 | 21 | 3.9 | 1.1 |

Interpretation and Recommendations:

For each of the eight statements, the results are comparable to those of 2019, with all of the differences in averages being well-within one standard deviation. The absolute averages are within 0.3, with most being within 0.1 or 0.2. The aggregate results are largely in ranges consistent with the aspirational answers. The survey question that needs the most improvement is “I have to work harder than others to be valued equally here in the department” (average 2.4). **31/54 = 57% agreed that they have to work harder than others to be valued equally.** Another question with a lower score was “The department provides sufficient resources to foster the success of its members” (average 3.6).

Looking beyond the averages, **there are areas for concern.** This includes 9/54 = 17% that do not feel valued as an individual in the department, 12/54 = 22% that have considered leaving the department of feelings of isolation or feeling unwelcome, 7/54 = 13% that do not feel the department has positively influenced their growth, 6/54 = 11% that do not feel like they belong to a community in the department, and 7/54 = 13% that do not feel they are treated with respect in the department.

RECOMMENDATION E1 - Increase efforts to improve the DEI culture in the department.

Engagement in these efforts is needed from department members at all positions in order to make personal and structural changes to the climate of the department. Potential avenues for this include more open discussion amongst members of the department, community-building exercises and activities, and incentivizing and rewarding efforts in improving the department’s DEI culture while being mindful not to foster an environment of performative allyship, *i.e.*, when diversity work is done to “check boxes” or for personal gain rather than being meaningfully engaged.

6f. Occurrences of Unfair Treatment

Respondents were asked “Over the past 12 months, how often have YOU experienced being unfairly treated in the WVU Department of Physics and Astronomy?” Possible responses were “Never”, “1-2 times”, and “3 or more times”. Results are given in the table below:

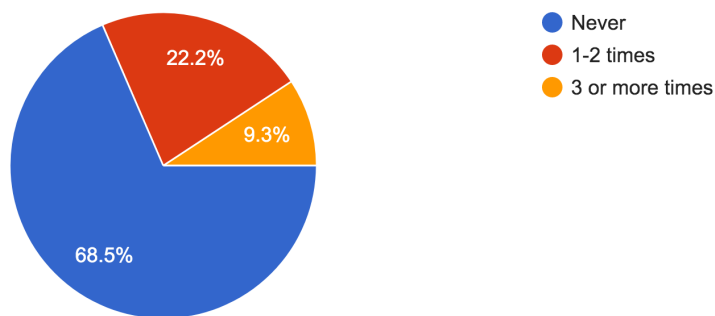
Responses:

| | Never | 1-2 times | 3 or more times |
|--------------------|-------|-----------|-----------------|
| Overall (54) | 37 | 12 | 5 |
| Undergraduates (9) | 7 | 2 | 0 |
| Grad Students (23) | 12 | 7 | 4 |
| Postdoc (3) | 3 | 0 | 0 |
| Faculty (13) | 10 | 3 | 0 |
| Staff (4) | 4 | 0 | 0 |
| Male (32) | 22 | 7 | 3 |
| Non-Male (19) | 12 | 5 | 2 |
| White (40) | 28 | 11 | 1 |
| Non-white (9) | 5 | 0 | 4 |
| Unreported (6) | 5 | 1 | 0 |

A pie chart of the overall results is given below:

Over the past 12 months, how often have YOU experienced being unfairly treated as a result of some aspect of your identity in the WVU Department of Physics and Astronomy?

54 responses



Respondents were asked “If you answered that YOU experienced being treated unfairly "1-2 times" or "3 or more times", please check any aspects of your identity below that you believe may have caused you to be the target of that behavior.” Results are in the table below:

Responses:

| Identity aspect leading to unfair treatment | Times checked |
|---|---------------|
| Sex | 5 |
| Social class | 4 |
| Age | 3 |
| National origin | 3 |
| Racial or ethnic identity | 3 |
| Religion | 3 |
| Ability of disability status | 1 |
| Gender identity or expression | 1 |
| Height or Weight | 1 |
| Sexual orientation | 1 |

Respondents were asked “What is the position of the person(s) that treated you unfairly as a result of aspects of your identity? Check all that apply.” Results are given in the table below:

| Position of the person that treated you unfairly | Undergraduate | Grad students | Faculty |
|--|---------------|---------------|---------|
| Overall (17) | 2 | 5 | 10 |
| Undergraduates (2) | 2 | 0 | 0 |
| Grad Students (11) | 0 | 4 | 7 |
| Faculty (3) | 0 | 1 | 2 |
| Male (10) | 2 | 5 | 3 |
| Non-Male (7) | 0 | 0 | 7 |
| White (12) | 2 | 3 | 7 |
| Non-white (4) | 0 | 1 | 3 |
| LGBTQ+ (1) | 0 | 1 | 0 |
| Disabled (1) | 0 | 0 | 1 |

Interpretation and Recommendations:

A total of $17/54 = 31\%$ of respondents reported experiencing being treated unfairly in the department. This includes $2/9 = 22\%$ of undergraduate respondents, $11/23 = 48\%$ of graduate students respondents, and $3/13 = 23\%$ of faculty respondents. The associated responses from 2019 were $26/100 = 26\%$ overall, $2/18 = 11\%$ of undergraduates, $17/48 = 35\%$ of graduate students, $6/21 = 29\%$ of faculty, and $1/8 = 13\%$ of staff. Differences in response rates make year-to-year comparisons unreliable; however, **that 17 of 54 respondents reported unfair treatment in 2020 and 26 of 100 in 2019 should be a source of substantial concern.**

By gender, $10/32 = 31\%$ of males and $7/19 = 37\%$ of Non-Males reported unfair treatment. For comparison, $11/71 = 15\%$ of males and $10/20 = 50\%$ of Non-Males reported unfair treatment in 2019. This suggests, with the typical caveat about statistical significance, the gender disparity in unfair treatment has decreased, but this is due predominantly to the increase in the rate of reports from males. By race, $12/40 = 30\%$ of White respondents and $4/9 = 44\%$ of non-White respondents reported unfair treatment. For comparison, $12/58 = 21\%$ of White respondents and $8/25 = 32\%$ of non-White respondents reported unfair treatment in 2019. Similar rates of 33% were reported by LGBTQ+ and disabled respondents. In 2019, these rates were $0/4 = 0\%$ and $2/12 = 17\%$, respectively. By every breakdown other than for non-Males, the trends are toward higher rates of unfair treatment (with the usual caveat of differences in response rate). **These results suggest that unfair treatment occurs across genders, races, and identity status, so actions to address unfair treatment must be broad. However, importantly, the rates of unfair treatment are**

higher amongst non-Males and non-Whites, so addressing the experiences of these minority groups is crucial.

The identity aspects that led to the reporting of unfair treatment were broad, with six different aspects selected at least three times. Each aspect is important to address, but **the most common were sex, social class, age, national origin, racial and ethnic identity and religion.** In 2019, the first five of these were the top five identity aspects leading to the unfair treatment.

The position of the person that were identified as those making respondents feel that unfair treatment took place were $10/17 = 59\%$ faculty, $5/17 = 29\%$ graduate students, and $2/17 = 12\%$ undergraduates. Undergraduates identified other undergraduates, while graduate students identified both other graduate students and faculty, and faculty identified both graduate students and other faculty. **This suggests that efforts to decrease unfair treatment cannot be focused on those in a particular position, but rather are needed across multiple positions in the department.** All seven non-Males reported faculty as the position of the person causing the unfair treatment. **This suggests that faculty are disproportionately involved in treating non-Males unfairly.** The majority of the reported instances for both White and non-White were carried out by faculty. This question was not asked in 2019, so no comparison can be made.

These results should again be analyzed in the context of intersectionality. **That unfair treatment occurs across genders, races, and identity status suggests that those whose identity intersects various groups are likely more susceptible to unfair treatment.**

RECOMMENDATION F1 – Undertake efforts to reduce the occurrences of unfair treatment in the department. Potential approaches include education efforts, discussions, mentorship training, and incentivizing appropriate behavior.

RECOMMENDATION F2 - Efforts need to be department-wide, not only to those in a particular position. Trainings targeting particular positions may be useful, but this should only be the start. The department should formalize avenues for complaints.

RECOMMENDATION F3 - Faculty need to be made aware of the findings and efforts to reduce the unfair treatment by faculty need to be implemented. Faculty meetings focused specifically on the results of the DEI survey are necessary to discuss the findings and recommendations. Efforts to improve the DEI climate of the department should be incentivized, and consequences for unfair treatment of others in the department need to be made clear and enforced.

RECOMMENDATION F4 – Be mindful of intersectionality in efforts to decrease unfair treatment in the department. In particular, the department should prioritize recommendations provided in the AIP report “The Time Is Now: Systemic Changes to Increase African Americans with Bachelor’s Degrees in Physics and Astronomy” to promote African American student success (Belonging, Physics Identity, Academic Support, Personal Support, Leadership and Structures) and the National Academies Report “Sexual Harassment of Women Climate, Culture, and Consequences in Academic Sciences, Engineering, and Medicine”.

6g. Suggestions for Improving DEI

Respondents were asked “What is your involvement in the DEI activities of the Department?” Possible responses and the number of responses is given in the table below:

Responses:

| Involvement in dept DEI activities | Never | Less than half the time | About half the time | More than half the time | Always |
|------------------------------------|-------|-------------------------|---------------------|-------------------------|--------|
| Overall (54) | 9 | 8 | 9 | 7 | 21 |
| Faculty (13) | 0 | 1 | 3 | 2 | 7 |
| Grad Student (23) | 3 | 2 | 5 | 2 | 11 |
| Undergraduate (9) | 4 | 3 | 1 | 1 | 0 |
| Staff (4) | 1 | 1 | 0 | 1 | 1 |
| Postdoc (3) | 1 | 1 | 0 | 1 | 0 |

Respondents were asked “I attend DEI journal clubs.” Possible responses and the number of responses is given in the table below:

Responses:

| “I attend DEI journal clubs” | Never | Less than half the time | About half the time | More than half the time | Always |
|------------------------------|-------|-------------------------|---------------------|-------------------------|--------|
| Overall (53) | 31 | 7 | 3 | 8 | 4 |
| Faculty (13) | 5 | 2 | 2 | 3 | 1 |
| Grad Student (23) | 12 | 4 | 1 | 4 | 2 |
| Undergraduate (8) | 8 | 0 | 0 | 0 | 0 |
| Staff (4) | 4 | 0 | 0 | 0 | 0 |
| Postdoc (3) | 2 | 0 | 0 | 0 | 1 |

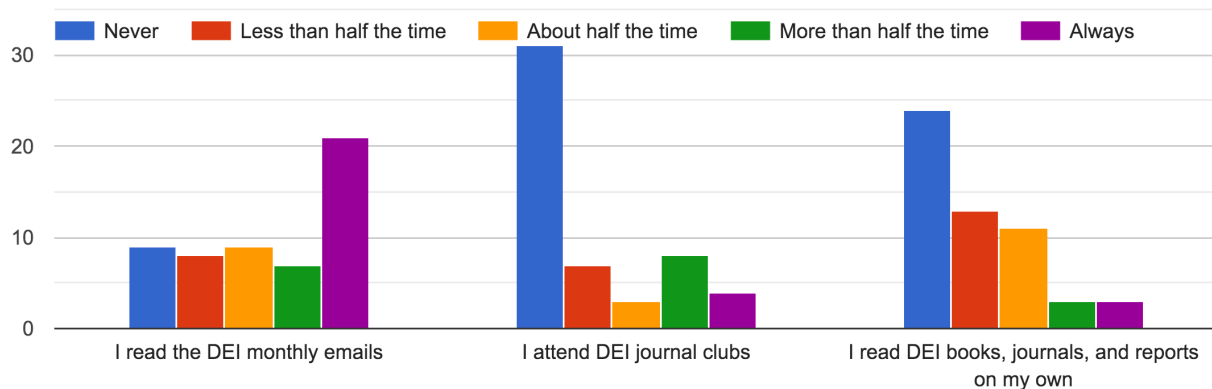
Respondents were asked “I read DEI books, journals, and reports on my own.” Possible responses and the number of responses is given in the table below:

Responses:

| I read DEI books, journals, & reports | Never | Less than half the time | About half the time | More than half the time | Always |
|---------------------------------------|-------|-------------------------|---------------------|-------------------------|--------|
| Overall (54) | 24 | 13 | 11 | 3 | 3 |
| Faculty (13) | 2 | 4 | 5 | 1 | 1 |
| Grad Student (23) | 9 | 8 | 3 | 1 | 2 |
| Undergraduate (9) | 8 | 1 | 0 | 0 | 0 |
| Staff (4) | 2 | 0 | 2 | 0 | 0 |
| Postdoc (3) | 3 | 0 | 0 | 0 | 0 |

The responses to these three questions for the overall department are shown in the chart below:

What is your involvement in the DEI activities of the Department?



Respondents were also asked to elaborate on their answers with the prompt: “As a result of the Department's DEI resources and findings (ex: monthly news emails, journal clubs, 2019 Climate Report), what changes have you implemented to try to improve the DEI climate of the department, if any, in the past 12 months?”

10/55 = 18% of the responses provided substantive responses to this question. These responses are summarized and presented by themes (not direct quotes) below:

- Seven responses were about changing behaviors:
 - increasing awareness of implicit biases and avoiding them
 - increasing awareness of communication with others
 - listening, studying, and enacting strategies to be a better ally
 - supporting peers when they have been treated unfairly
 - trying to call people out more on attitudes, comments, and actions that contribute to a hostile environment
 - helping maintain an open and welcoming environment in the Undergraduate Physics Lounge
 - telling students/colleagues they don't expect responses or work outside of working hours
- Four responses were about participation in department DEI initiatives:
 - leading DEI Journal Clubs
 - participating in the DEI Journal Club as presenter and attendee
 - recommending attendance at DEI Journal Club to others
 - serving on the DEI committee
 - supporting the APS Bridge application and volunteer mentor
 - helping to apply to host CUWiP
 - hosting a qual study session for grad students
 - discussing departmental DEI practices with other departments
- One response was to point out the poor presentation of the 2019 Climate Report so future ones are more accurate and fair.

Respondents were asked: “Do you have suggestions for how the WVU Department of Physics and Astronomy can improve the culture and openness in the areas of diversity, equity and inclusion?”

16/55 = 29% of respondents provided an answer to this question, plus three responses saying the department is doing well and one saying the department should not show off but should be fair. Other responses are summarized by themes (not direct quotes) below:

- Five discussed broadening participation:
 - more in-person discussions, maybe mandatory for all grad students and faculty.
 - need more interactions in the different groups, and as a group as a whole, graduate student representation in events is dominated by astronomy students, faculty barely interact outside of faculty meetings and colloquia, postdocs as a community are largely ignored.
 - there are things we could do or be doing, but we're not doing them because it takes effort of many faculty and staff, and there is little personal incentive to take on those tasks, reduce the burden of other service for those involved.
 - more personnel, both faculty and students, able to implement department policy changes in DEI.
- Two discussed broadening training:
 - mandatory implicit bias and microaggression training in the department.
- Four discussed departmental responses to reports of DEI issues:
 - listen to students who report harassment and/or unfair treatment.
 - take harassment into account in tenure decisions.
 - seek the best solutions and offer genuine help, not just the easiest resolution.
- Two discussed approaches for receiving complaints:
 - have an external ombudsman for student issues.
 - have a chain of people to talk to if someone has a DEI issue.
- Two mentioned the importance of retention of underrepresented minorities (URMs):
 - develop measures to make URM students feel included and to retain them, the department has treated issues regarding inclusion and retention of its URM students flippantly and not seen them as DEI issues.
- One made suggestions for DEI Journal Club:
 - revisit topics that are discussed in DEI journal club to keep better tabs on how people are implementing things from topics that were previously discussed.
- Two mentioned concerns about doing too much with DEI:
 - focus on developing studies and beneficial activities for students.
 - putting too much emphasis on DEI issues can be harmful, and we're pretty close to it now.

Respondents were asked: “Is there anything else you would like to say about diversity, equity, and inclusion in the WVU Department of Physics and Astronomy?”

There were $8/55 = 15\%$ substantive responses. There were two generic positive comments: one said the department is improving, and one said the lounge is fine. One comment was that the report should be on the department website, but this had already been done. A comment was made about a faculty/graduate student matter, but the comment did not mention DEI. All the other comments are summarized below:

- Three expressed a desire for broader participation:
 - everyone should go to DEI journal club.
 - there are 4 or 5 faculty that actually care and are trying to make improvements.
- Two responses expressed complaints with the department’s response to DEI issues:
 - the department as a whole does not do anything or hold people accountable when DEI issues are brought up, it makes attempts to improve the department look like a farce, it is difficult to recommend WVU to any minority student.
 - when issues arise and victims talk to people in power, victims are not listened to.
 - this department allows people, especially faculty and others in power, to continue their abusive behavior with no repercussions or correction.
- One response was about the need for improving equity and inclusion in addition to our efforts on diversity.
- Two responses had suggestions to better analyze the department climate surveys:
 - don’t hide the statistics/results of a climate survey in poorly made charts under the guise of “small number statistics”, get help from people in the department whose research is in aggregating and displaying survey results.
- One comment linked to a website to explain their experiences as a minority. The website discusses how minorities in the business world are viewed positively while they are in lower positions, but then are viewed as more of a threat as they advance in their careers.
- One had a number of complaints that the department does not do enough for DEI:
 - there is a lot of talk and little action, the DEI Committee has no real power in the department and is vestigial.
 - the department needs to enact change now and stop putting it off until later like pointing to the APS Bridge Program; that program should not be the solution, it should be the next step for a department that is already improving DEI efforts.
 - people in this department need to start speaking up about mistreatment.
 - include people who are marginalized or have little power in your decision making.

7. Listing of All Recommendations

RECOMMENDATION A1 - Implement approaches to increase participation in the climate survey. Potential approaches could include instituting rewards for students for participating (such as extra credit in classes) and having faculty reinforce the utility of participation in their physics classes and to their research groups. Shifting the survey to the Qualtrics platform, where targeted reminders could be provided, may also improve participation.

RECOMMENDATION A2 – Work towards having the climate survey administered externally rather than by a department committee. External efforts can work to improve the response rate and may get higher response rates if respondents feel more comfortable responding to external surveys. External specialists in DEI surveys are also better trained to analyze surveys than department members.

RECOMMENDATION B1 - Undertake efforts to improve the department climate for graduate students. Potential avenues for this include increased communication with faculty and modes for graduate students to express their concerns. Other approaches are actively being considered by the department, including enhanced graduate student mentoring associated with an application to the APS Bridge program, and the shared leadership approach recommended by the APS-IDEA network.

RECOMMENDATION B2 – Undertake efforts to improve the department climate for non-Whites. Potential avenues for this include the development of a departmental strategy using input from departmental members from all positions. Sample ideas from preliminary discussions on this include increased micro-aggression and implicit bias training, ensuring the department colloquium has representation from a diverse set of speakers, implementing an “Underrepresentation Curriculum” (<https://underrep.com/>) in classes, discussions about racism in academia in the DEI Journal Club (which has already begun), etc.

RECOMMENDATION B3 – Be mindful of intersectionality in efforts to improve the department climate for graduate students and non-Whites. There are aspects of being both a graduate student and non-White that influence experiences. Extra care is recommended to connect non-White students who lack faculty members in the department sharing their experiences to mentors and support systems outside of the department, such as the “100 Black Women at West Virginia University” group at the university (<https://wvuengage.wvu.edu/organization/100bw>) and related programs through national societies and organizations (American Physical Society, National Society of Black Physicists, and the National Society of Hispanic Physicists).

RECOMMENDATION B4 – (Based on respondent comments provided later in the document) Assess department procedures for addressing DEI complaints and accountability for violations. The department should have transparent procedures for receiving and addressing complaints and ensure department members are aware of the procedures.

RECOMMENDATION C1 - Laud and reward the staff in the main office for consistently fostering a welcoming and inclusive main office.

RECOMMENDATION C2 – Undertake efforts to improve the experience of the department’s students in their interactions with their advisors. Potential avenues for this include mentorship training and broader efforts in undergraduate advising training.

RECOMMENDATION C3 – Undertake efforts to enhance the feeling of inclusion at departmental social events. Potential avenues for this include adding statements about inclusivity to email announcements about departmental social events, ensuring that social events and activities at departmental events accommodate a broader range of cultures, and gathering information about how social events can be made more inclusive.

RECOMMENDATION D1 – Undertake efforts to improve the friendliness of the department to those in the non-majority (Non-Whites and Non-Males). Potential avenues for this include increased number of training on issues like microaggressions. However, the National Academies Report “Sexual Harassment of Women Climate, Culture, and Consequences in Academic Sciences, Engineering, and Medicine” suggests trainings must be augmented by other approaches. This should include significant self-reflection and concerted day-to-day effort by all departmental members. The department can encourage this by increasing the level of discussion of matters affecting those in the minority and broadened participation in these activities by those in the majority. This can include creating safe spaces for discussion, a repository of shared resources, and adopting a culture of honest self-reflection.

RECOMMENDATION D2 – Undertake efforts to support members of the department, especially those in the non-majority. Potential avenues for this include the development of a plan to carry this out with significant input from those in the non-majority. Existing resources should be used in such efforts, such as the AIP report “The Time Is Now: Systemic Changes to Increase African Americans with Bachelor’s Degrees in Physics and Astronomy” to improve experiences of Black members in the department, the National Academies Report “Sexual Harassment of Women Climate, Culture, and Consequences in Academic Sciences, Engineering, and Medicine” to improve the experiences of women in the department, and the National Society of Hispanic Physicists and American Association of Physics Teacher “Report on the Conference for Enhancing Undergraduate Physics Programs at Hispanic-Serving Institutions” to improve the experiences of Hispanics in the department.

RECOMMENDATION E1 - Increase efforts to improve the DEI culture in the department. Engagement in these efforts is needed from department members at all positions in order to make personal and structural changes to the climate of the department. Potential avenues for this include more open discussion amongst members of the department, community-building exercises and activities, and incentivizing and rewarding efforts in improving the department’s DEI culture while being mindful not to foster an environment of performative allyship, *i.e.*, when diversity work is done to “check boxes” or for personal gain rather than being meaningfully engaged.

RECOMMENDATION F1 – Undertake efforts to reduce the occurrences of unfair treatment in the department. Potential approaches include education efforts, discussions, mentorship training, and incentivizing appropriate behavior.

RECOMMENDATION F2 - Efforts need to be department-wide, not only to those in a particular position. Trainings targeting particular positions may be useful, but this should only be the start. The department should formalize avenues for complaints.

RECOMMENDATION F3 - Faculty need to be made aware of the findings and efforts to reduce the unfair treatment by faculty need to be implemented. Faculty meetings focused specifically on the results of the DEI survey are necessary to discuss the findings and recommendations. Efforts to improve the DEI climate of the department should be incentivized, and consequences for unfair treatment of others in the department need to be made clear and enforced.

RECOMMENDATION F4 – Be mindful of intersectionality in efforts to decrease unfair treatment in the department. In particular, the department should prioritize recommendations provided in the AIP report “The Time Is Now: Systemic Changes to Increase African Americans with Bachelor’s Degrees in Physics and Astronomy” to promote African American student success (Belonging, Physics Identity, Academic Support, Personal Support, Leadership and Structures) and the National Academies Report “Sexual Harassment of Women Climate, Culture, and Consequences in Academic Sciences, Engineering, and Medicine”.

WVU Department of Physics & Astronomy Diversity, Equity, & Inclusion Climate Survey

The WVU Department of Physics & Astronomy Diversity, Equity, & Inclusion (DEI) Committee is tasked with annually assessing the DEI climate of the department. (This differs from the climate/culture of the university as a whole - this survey specifically addresses the inclusiveness of the department.) The purpose of obtaining this information is to help the department learn and grow. This survey is completely anonymous, and individual responses will not be shared with anyone. Only aggregate trends will be analyzed. Please answer questions based on your experiences for the preceding 12 months only. All questions are optional -- you may choose to skip questions, but please note that the results will only be as robust as the data we receive.

Note you can browse the Physics & Astronomy Department's DEI website here, which include a link to the 2019 report from this survey: <https://physics.wvu.edu/about/diversity-equity-and-inclusivity>

1. 1. How satisfied are you with the overall climate in the WVU Department of Physics and Astronomy that you have experienced in the past 12 months?

Mark only one oval.

- ☐ Very Dissatisfied
- ☐ Dissatisfied
- ☐ Neither Satisfied nor Dissatisfied
- ☐ Satisfied
- ☐ Very Satisfied

2. 2. In the past 12 months, I have felt accepted and/or included in...

Mark only one oval per row.

| | Strongly Disagree | Disagree | Neutral | Agree | Strongly Agree | Not Applicable |
|---------------------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| The department overall | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| The main office | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| The undergraduate physics lounge | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| The TA office | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| My physics/astronomy classes | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| My physics/astronomy advisor's office | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| My physics/astronomy course labs | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| My physics/astronomy research labs | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Departmental social events | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| The machine shop | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

3. Please comment on your level of acceptance and/or inclusion in any WVU Department of Physics and Astronomy settings in the last 12 months.

4. 3. Based on your direct experiences in the last 12 months, select one option on the scale that best represents how you would rate the climate in the WVU Department of Physics and Astronomy.

Mark only one oval.

| | | | | | | |
|---------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|----------|
| | 1 | 2 | 3 | 4 | 5 | |
| Hostile | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | Friendly |

5. Mark only one oval.

| | 1 | 2 | 3 | 4 | 5 | |
|--------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|------------|
| Racist | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | Non-racist |

6. Mark only one oval.

| | 1 | 2 | 3 | 4 | 5 | |
|---------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-------------|
| Diverse | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | Homogeneous |

7. Mark only one oval.

| | 1 | 2 | 3 | 4 | 5 | |
|--------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|------------|
| Sexist | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | Non-sexist |

8. Mark only one oval.

| | 1 | 2 | 3 | 4 | 5 | |
|-------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-------------|
| Cooperative | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | Competitive |

9. Mark only one oval.

| | 1 | 2 | 3 | 4 | 5 | |
|------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|----------------|
| Homophobic | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | Non-homophobic |

10. Mark only one oval.

| | 1 | 2 | 3 | 4 | 5 | |
|--------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|------------|
| Unsupportive | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | Supportive |

11. Mark only one oval.

| | 1 | 2 | 3 | 4 | 5 | |
|-----------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-------------|
| Welcoming | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | Unwelcoming |

12. Mark only one oval.

| | 1 | 2 | 3 | 4 | 5 | |
|---------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-------------|
| Elitist | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | Non-elitist |

13. 4. Considering your experiences over the past 12 months, please indicate your level of agreement with each of the following statements.

Mark only one oval per row.

| | Strongly Disagree | Disagree | Neither | Agree | Strongly Agree |
|---|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| I feel valued as an individual in the WVU Department of Physics & Astronomy | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I have considered leaving the department because I felt isolated or unwelcomed | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| My experience in the department has had a positive influence on my professional growth | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| There is too much emphasis put on issues of diversity, equity, and inclusion in the department | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I have to work harder than others to be valued equally here in the department | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I have found one or more communities or groups where I feel I belong in the Department of Physics and Astronomy | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| The department provides sufficient resources to foster the success of its members | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I am treated with respect in the department | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

14. 5. Over the past 12 months, how often have YOU experienced being unfairly treated in the WVU Department of Physics and Astronomy?

Mark only one oval.

- ☐ Never
- ☐ 1-2 times
- ☐ 3 or more times

Unfair Treatment

15. If you answered that YOU experienced being treated unfairly "1-2 times" or "3 or more times", please check any aspects of your identity below that you believe may have caused you to be the target of that behavior.

Check all that apply.

- ☐ Ability or disability status
- ☐ Racial or ethnic identity
- ☐ Sex
- ☐ Gender identity or expression
- ☐ Sexual orientation
- ☐ Veteran status
- ☐ Marital status
- ☐ National origin
- ☐ Age
- ☐ Religion
- ☐ Height or Weight
- ☐ Political orientation
- ☐ Social Class

16. Where did the unfair treatment occur?

Scroll right for all options
Mark only one oval per row.

| | Ability or disability status | Racial or ethnic identity | Sex | Gender identify or expression | Sexual orientation | Veteran status | Marital status | National origin | Age | Religion | Height or Weight | Political Orientation | Social Class |
|---------------------------------------|------------------------------|---------------------------|-----------------------|-------------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| The department overall | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| The main office | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| The undergraduate physics lounge | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| The TA office | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| My physics/astronomy classes | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| My physics/astronomy advisor's office | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| My physics/astronomy course labs | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| My physics/astronomy research labs | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Departmental social events | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| The machine shop | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Other | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

17. If you marked that you experienced unfair treatment related to gender or sex, what type of experiences did you have?

This question is for comparison to the study, "Sexual harassment reported by undergraduate female physicists" by Aycock, Hazari, Brewster, and Clancy in Physical Review Physics Education Research (2019).

Mark only one oval.

- ☐ someone made sexual remarks or told inappropriate jokes or stories
- ☐ someone made comments of a sexual nature or tone about your body, appearance, or clothing or discussed your sexual activity
- ☐ someone made sexist remarks (ex: suggesting people of your sex or gender are not as good at physics or math)
- ☐ someone treated you differently, ignored you, or put you down because of your sex or gender
- ☐ someone repeatedly asked you out, messaged or contacted you after you said "no" or asked the person to stop
- ☐ someone touched you without your permission making you uncomfortable

DEI Survey continued**18. What is your involvement in the DEI activities of the Department?**

Mark only one oval per row.

| | Never | Less than half the time | About half the time | More than half the time | Always |
|---|-----------------------|-------------------------|-----------------------|-------------------------|-----------------------|
| I read the DEI monthly emails | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I attend DEI journal clubs | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I read DEI books, journals, and reports on my own | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

19. As a result of the Department's DEI resources and findings (ex: monthly news emails, journal clubs, 2019 Climate Report), what changes have you implemented to try to improve the climate of the department, if any, in the past 12 months?

20. **6. Do you have suggestions for how the WVU Department of Physics and Astronomy can improve the culture and openness in the areas of diversity, equity and inclusion?**

Demographic Questions

21. **7. What is your position in the WVU Department of Physics and Astronomy?**

Mark only one oval.

- ☐ Faculty
- ☐ Staff
- ☐ Postdoc
- ☐ Graduate Student
- ☐ Undergraduate Student
- ☐ Other: _____

22. **8. What is your current gender identity?**

Check all that apply. (Reminder - this is optional.)

Check all that apply.

- ☐ Male
- ☐ Female
- ☐ Non-binary / third gender
- ☐ Transgender
- ☐ Prefer not to say
- ☐ Other: _____

23. **9. Please indicate the racial or ethnic groups with which you identify**

Check all that apply. (Reminder - this is optional.)

Check all that apply.

- ☐ African American / Black
- ☐ Asian American / Asian
- ☐ Hispanic / Latino/a
- ☐ Middle Eastern / North African
- ☐ Native American / Alaskan Native / Pacific Islander
- ☐ White
- ☐ Multi-racial
- ☐ Other: _____

24. **10. Do you consider yourself a member of the Lesbian, Gay, Bisexual and/or Transgender (LGBT) community?**

(Reminder - this is optional.)

Mark only one oval.

- ☐ Yes
- ☐ No
- ☐ No, but I identify as an ally
- ☐ Prefer not to say

25. 11. Before becoming part of the WVU Department of Physics of Physics and Astronomy:

(Reminder - this is optional.)

Mark only one oval.

- ☐ All of my education and career experience was inside of the U.S.
- ☐ I had limited education or career experience outside the U.S.
- ☐ Most of my education and career experience was outside the U.S.
- ☐ All of my education and career experience was outside the U.S.

26. 12. Have you ever served in the U.S. Armed Forces, Military Reserves, or National Guard?

(Reminder - this is optional.)

Mark only one oval.

- ☐ Yes
- ☐ No

27. 13. Do you have a disability?

For example: Autism, Blind/Low Vision, Deaf/Hard of Hearing, Learning Disability, Mobility Condition, Speech Condition, etc. (Reminder - this is optional.)

Mark only one oval.

- ☐ Yes
- ☐ No
- ☐ Maybe

28. 14. Is there anything else you would like to say about diversity, equity, and inclusion in the WVU Department of Physics and Astronomy?

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