

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 2019 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 and a brief assessment of them.

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) 2019 WVU Department of Physics and Astronomy climate survey was administered online to faculty, staff, postdocs, graduate students, and undergraduate students from

February 14-28, 2019. Survey responses were obtained anonymously and analyzed in aggregate. This document presents the results and a brief analysis.

3. Departmental DEI Efforts in 2018-2019

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

- Held annual departmental Title IX training and established mechanism to keep track of who has completed it.
- Held departmental LGBTQ+ Safe Zone Training (attendance 6)
- Began the DEI Journal Club
- Has a “Women in Physics” Listserv and Women’s Lunches
- Created a “Diversity, Equity, and Inclusivity” committee
- Added graduate student liaison to the DEI committee
- Began monthly DEI email announcements
- Had four special DEI trainings for students (2 for undergraduates, 2 for grad students)

4. Analysis of the Survey

The anonymous results of the survey were shared with the DEI committee. The data were analyzed in aggregate. A report was completed in the summer of 2019 and distributed to the department and publicly early in Fall 2019.

A DEI Journal Club session in Fall 2019 was devoted to discussing the results with the department. At this session, complaints were made that the analysis in the original report was superficial and misleading. Consequently, this report is a redone version. It mirrors the analysis carried out for the 2020 climate survey, except there are no recommendations provided here since a year has gone by since the survey was carried out.

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.

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.

5. 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.

5a. Participation

Number of Respondents:

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

Participation by Position	Respondents	# Possible	Response Rate
Overall	101	208	49%
Undergraduates	18	75	24%
Graduate Students	48	71	68%
Postdocs	4	19	21%
Faculty	21	34	62%
Staff	8	9	89%
Other/Unreported	2	N/A	N/A

Racial and Ethnic Breakdown of Respondents:

The following table breaks down the number of respondents by Race/Ethnicity. Note, the totals need not add up to the total number of respondents in each title because some respondents gave multiple responses.

Race/Ethnicity by Position	White	Asian	Black/ African American	Hispanic / Latinx	Native American / Alaskan Native / Pacific Islander	Middle Eastern	Multi- racial	Unreported
Overall (105)	60	16	2	1	2	4	3	17
Undergraduate (20)	16	1	0	0	1	0	0	2
Grad Student (51)	28	9	2	1	1	4	0	6
Postdoc (4)	0	2	0	0	0	0	1	1
Faculty (21)	13	4	0	0	0	0	0	4
Staff (8)	4	0	0	0	0	0	1	3
Unreported (2)	0	0	0	0	0	0	1	1

Gender Breakdown for Respondents:

Position	Male	Female	Non-binary/Unreported
Overall (101)	71	19	11
Undergraduates (18)	14	2	2
Graduate Students (48)	37	8	3
Postdocs (4)	3	1	0
Faculty (21)	13	4	4
Staff (8)	3	4	1
Unreported (2)	1	0	1

Assessment of Response Rate:

Typical internal surveys have a 30-40% response rate¹. The response rate from graduate students, faculty, and staff was quite high, as was the overall rate. **The response rates for undergraduates and postdocs was rather low.** This is typical, but should be worked on for future departmental climate surveys.

¹ <https://www.surveygizmo.com/resources/blog/survey-response-rates/>

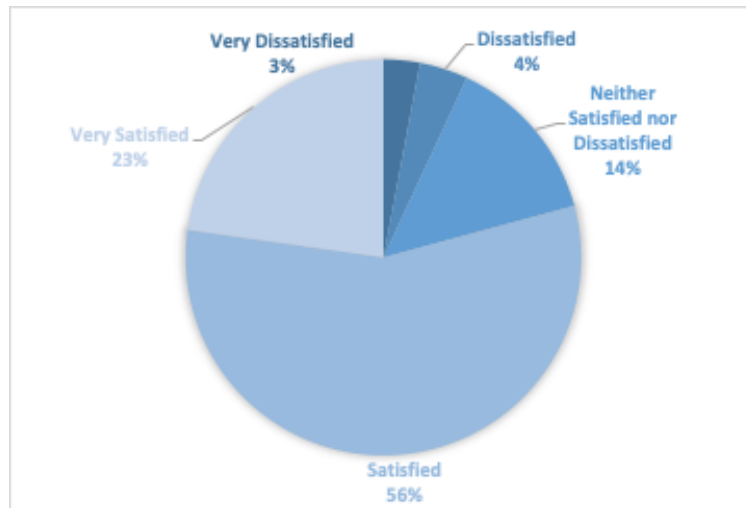
5b. Satisfaction with Overall Climate

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 (101)	3	4	14	57	23	3.9	0.9
Undergraduates (18)	0	0	3	7	8	4.3	0.7
Grad Students (48)	1	1	6	32	8	3.9	0.8
Postdocs (4)	1	0	0	3	0	3.3	1.5
Faculty (21)	1	2	3	11	4	3.7	1.0
Staff (8)	0	0	2	3	3	4.1	0.8
Male (71)	1	1	9	45	15	4.0	0.7
Female (19)	1	1	2	8	7	4.0	1.1
Other/Unreported (11)	1	2	3	4	1	3.2	1.2
White (61)	0	1	8	34	18	4.1	0.7
Non-White (25)	2	1	3	17	2	3.6	1.0
Unreported Race (17)	1	2	3	7	4	3.6	1.2
LGBTQ+ (4)	0	0	2	0	2	4.0	1.2
Disabled (12)	0	0	0	7	5	4.4	0.5

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



Interpretation:

Overall, 79% of respondents responded either “Very Satisfied” or “Satisfied”, and the overall average was in the “Satisfied” range. However, 7% of respondents responded “Very Dissatisfied” or “Dissatisfied,” representing responses from the titles of postdoc, faculty, and graduate student. **This suggests there are a sizable population of department members dissatisfied with the overall climate in the department.**

It is important to note that the survey has a relatively low number of respondents, so breaking down scores amongst subgroups should be done with caution. Average levels of satisfaction are relatively similar among all five titles, with Undergraduate students and Staff having the highest level of satisfaction with the overall department climate, and Postdocs being lowest (with very low statistics). Male and female members of the department have equal average overall satisfaction with the department climate, at the Satisfied level. However, the fraction of respondents that are dissatisfied is higher for females than males.

White respondents average was in the “Satisfied” range, with 1/61 = 2% in the Dissatisfied range. This is contrasted with Non-White respondents, for whom the 3.6 average is between neutral and Satisfied, and for whom 3/25 = 12% were in the Dissatisfied range. **This implies that there is a disparity in the overall satisfaction levels between Whites and Non-Whites, with non-Whites feeling less satisfied on average and are dissatisfied at a higher rate. This is an important area for growth and improvement in the department climate.**

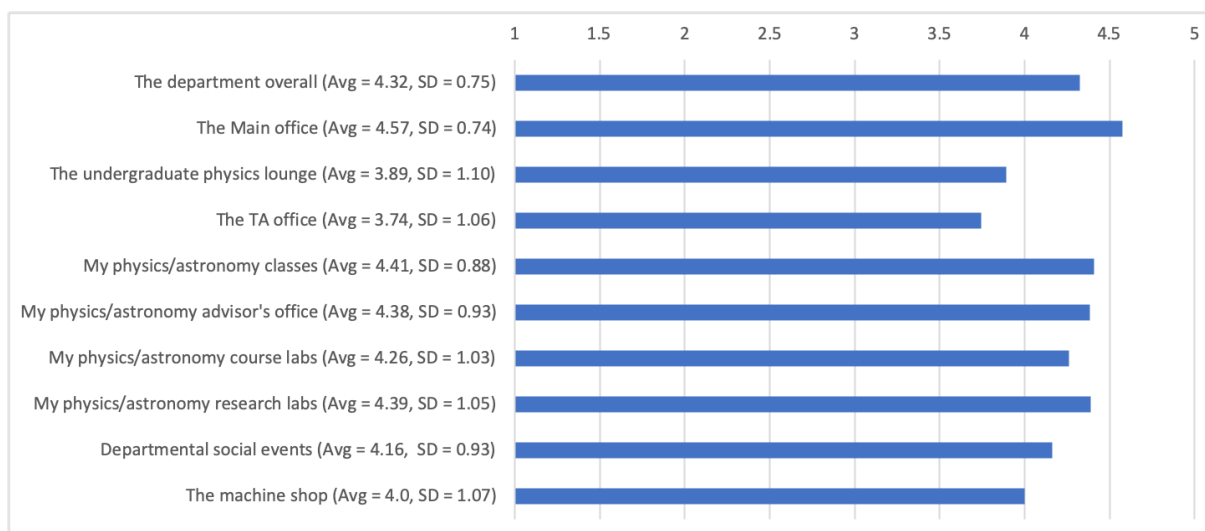
LGBTQ+ and Disabled respondents were Satisfied with the climate on average, and none reported dissatisfaction.

5c. Feeling of Inclusion By Location

“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”.

Overview:

Average results with standard deviations for ten different department locations is given in the following graph:



Responses (The department overall):

Feeling of Inclusion in Department Overall	SD (1)	D (2)	N (3)	A (4)	SA (5)	Average	SD
Overall (99)	1	2	8	42	46	4.3	0.8
Undergraduates (18)	1	1	0	7	9	4.2	1.1
Grad Students (48)	0	1	6	22	19	4.2	0.7
Postdocs (4)	0	0	0	2	2	4.5	0.6
Faculty (21)	0	0	2	10	9	4.3	0.6
Staff (7)	0	0	0	1	6	4.9	0.3

Male (71)	1	2	4	32	32	4.3	0.8
Female (19)	0	0	2	6	11	4.5	0.7
Other/Unreported (9)	0	0	2	4	3	4.1	0.8
White (59)	1	1	2	24	31	4.4	0.8
Non-White (25)	0	1	3	13	8	4.1	0.8
LGBTQ+ (4)	0	0	0	2	2	4.5	0.6
Disabled (12)	1	1	0	3	7	4.2	1.3

Responses (The main office):

Feeling of Inclusion in the Main Office	SD (1)	D (2)	N (3)	A (4)	SA (5)	Average	SD
Overall (96)	3	1	2	25	65	4.5	0.9

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 (15)	1	0	2	3	9	4.3	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 (21)	1	2	6	5	7	3.7	1.2

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
Ugrads + Grad students (48)	2	0	4	11	31	4.4	1.0
Undergraduates (18)	1	0	2	2	13	4.4	1.1
Grad Students (30)	1	0	2	9	18	4.4	0.9

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
Ugrads + Grad Students (28)	1	1	2	8	16	4.3	1.0
Undergraduates (12)	1	0	0	3	8	4.4	1.1
Grad Students (16)	0	1	2	5	8	4.3	0.9

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 (65)	2	3	4	15	41	4.4	1.0
Undergraduates (17)	2	1	1	4	9	4.0	1.4
Grad Students (46)	0	2	3	11	30	4.5	0.8
Postdocs (2)	0	0	0	0	2	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 (56)	3	1	3	12	37	4.4	1.1
Undergraduates (14)	2	0	0	1	11	4.4	1.4
Grad Students (37)	1	1	3	11	21	4.4	0.9
Postdocs/Faculty (5)	0	0	0	0	5	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 (92)	1	5	12	34	40	4.2	0.9
Undergraduates (14)	1	0	2	1	10	4.4	1.2
Grad Students (45)	0	4	5	23	13	4.0	0.9
Postdocs (4)	0	0	2	1	1	3.8	1.0
Faculty (21)	0	0	3	6	12	4.4	0.7
Staff (7)	0	1	0	2	4	4.3	1.0
Male (64)	1	3	8	24	28	4.2	0.9
Non-Male (19)	0	1	1	7	10	4.4	0.8
White (53)	1	2	4	18	28	4.3	0.9
Non-White (24)	0	2	3	11	8	4.0	0.9
LGBTQ+ (3)	0	0	0	2	1	4.3	0.6
Disabled (10)	1	0	2	2	5	4.0	1.3

Detailed 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 (46)	2	2	8	16	18	4.0	1.1

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.”

- 37/101 respondents provided an answer to this question.
- 2 were somewhat negative: One of these by a student referenced a problem with a faculty member’s teaching, but it did not mention DEI. One comment mentioned feeling like a random student wandering into the main office and felt like others thought they shouldn’t be there.
- 20 of these were mildly to generically positive (ex: “I feel accepted,” or “I have not felt excluded from any event,” “Good,” and “It’s fine.”)
- 13 were strongly positive (ex: “I have felt very welcome in the department,” and “I feel home here at WVU Physics. Amazing people,” and the department’s acceptance is “outstanding.”)
- Other comments included (paraphrased): the department does a good job at trying to increase the diversity and inclusivity through going to conferences; members of the department tend to be in their own worlds too much; hard to comment on the department overall because the department feels fragmented.

Interpretation:

The average response to “The department overall” was 4.3 out of 5, with 84 responses of “Strongly Agree” or “Agree” and 3 responses of “Strongly Disagree” or “Disagree.” (The “Strongly Disagree” respondent gave favorable responses to other questions, so it is likely it was selected in error.) All subgroups had averages within a standard deviation (0.8) of the average. Males and females had similar averages, with the disagreement responses all coming from males. Averages for Whites and non-Whites were also similar (slightly higher for Whites), with rates of disagreement similar between the two. **This suggests that there are small disparities between races and gender for feelings of inclusion for the department overall.**

For particular locations, interpretations follow:

- Main Office - The average feeling of inclusion is between Agree and Strongly Agree, but also had four SD or D responses.

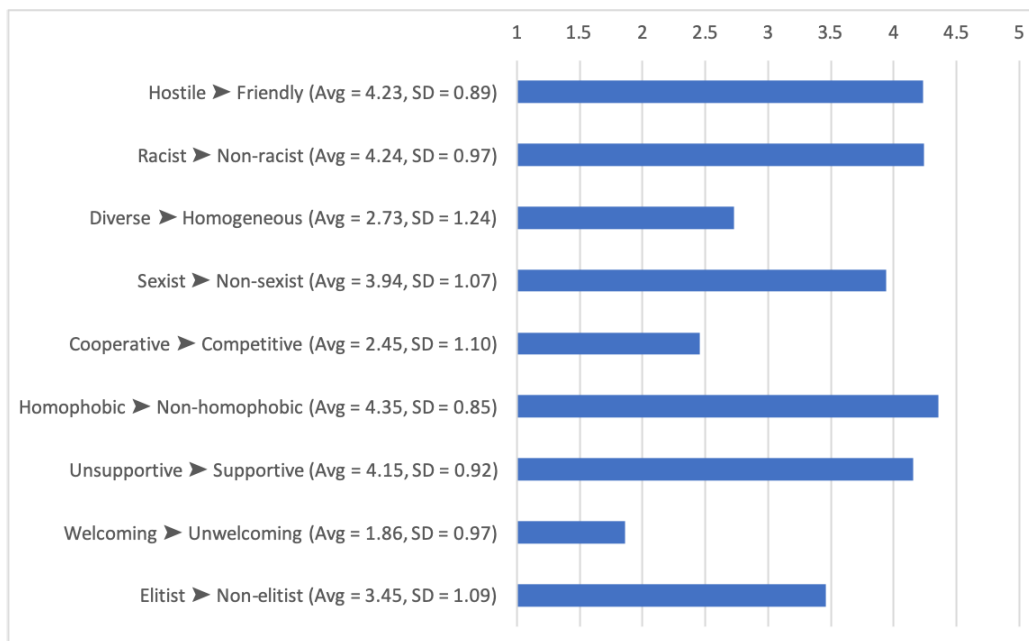
- Undergraduate Physics Lounge - The average is slightly above Agree. The number of SD and D responses was $1/15 = 7\%$. The response rate is low, so it is important to monitor this situation.
- TA Office - The average was between Neutral and Agree. This was the lowest average of any location in the department. There were $3/21 = 14\%$ SD or D responses. **The low average for feeling of inclusion in the TA Office and high fraction of Disagree responses suggests efforts need to be taken to make the TA Office more inclusive.**
- My physics/astronomy classes and course labs - The average was above A for both undergraduates and graduate students for each setting. Two students responded SD or D for each setting. **Thus, the majority feels included in classes and course labs, but there are people not feeling included.**
- My physics/astronomy advisor's office - The overall average was above Agree. However, $5/65 = 8\%$ of respondents chose SD or D. **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 average were between A and SA, but there were $4/56 = 7\%$ SD or D responses. **This suggests that most experiences in research labs are good, but there are students that have had inclusion issues in the lab.**
- Departmental social events - The overall average was Agree. There were $6/92 = 7\%$ with SD or D responses. The respondents with SD or D responses include Whites and non-Whites, Males and non-Males, a Disabled person, and were from the positions of undergraduates, graduate students, and staff. **There is therefore a sizable population that does not have a feeling of inclusion at departmental social events.**
- Departmental machine shop - The average is Agree. There were $4/46 = 9\%$ of responses of SD or D. **Thus, while the average is reasonable, there is a population that does not feel included.**

5d. 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.

Overview:

Average results with standard deviations for ten different department locations is given in the following graph:



Detailed responses Hostile → Friendly

Hostile → Friendly	1	2	3	4	5	Average	SD
Overall (99)	2	3	9	41	44	4.2	0.9
Non-White (25)	1	1	2	8	13	4.2	1.1
Non-Male (20)	1	0	3	7	9	4.2	1.0

Detailed responses Racist → Non-Racist

Racist → Non-racist	1	2	3	4	5	Average	SD
Overall (99)	2	5	10	32	50	4.2	1.0
Non-White (24)	1	1	4	4	14	4.2	1.1

Detailed responses Diverse → Homogeneous

Diverse → Homogeneous	1	2	3	4	5	Average	SD
Overall (99)	21	24	20	29	5	2.7	1.2
Non-White (24)	6	6	5	6	1	2.6	1.2
Non-Male (20)	5	5	2	7	1	2.7	1.3

Detailed responses Sexist → Non-Sexist

Sexist → Non-Sexist	1	2	3	4	5	Average	SD
Overall (97)	3	8	16	35	35	3.9	1.1
Non-Male (20)	0	5	1	8	6	3.8	1.2

Detailed responses Cooperative → Competitive

Cooperative → Competitive	1	2	3	4	5	Average	SD
Overall (98)	21	32	29	11	5	2.5	1.1

Detailed responses Homophobic → Non-Homophobic

Homophobic → Non-Homophobic	1	2	3	4	5	Average	SD
Overall (96)	0	2	17	22	55	4.4	0.8
LGBTQ+ (4)	0	1	0	1	2	4.0	1.4

Detailed responses Unsupportive → Supportive

Unsupportive → Supportive	1	2	3	4	5	Average	SD
Overall (98)	1	5	14	36	42	4.2	0.9

Detailed responses Welcoming → Unwelcoming

Welcoming → Unwelcoming	1	2	3	4	5	Average	SD
Overall (99)	45	32	14	7	1	1.9	1.0
Non-White (24)	13	5	2	3	1	1.9	1.2
Non-Male (20)	11	6	2	1	0	1.7	0.9

Detailed responses Elitist → Non-elitist

Elitist → Non-elitist	1	2	3	4	5	Average	SD
Overall (96)	5	13	28	33	17	3.5	1.1

Interpretation:

For particular descriptors, interpretations follow:

- Hostile → Friendly - The average was in the friendly range overall. However, there were $5/99 = 5\%$ responding in the hostile range. It will be important to monitor this longitudinally. Non-Whites and Non-Males had an average of 4.2, the same as the overall result, which indicates that hostility is not disproportionately affecting those in the minority on average. There were 2 Non-White and 1 Non-Male responses of a feeling of hostility. These results should be monitored.
- Racist → Non-Racist - The overall average is Non-Racist. However, there were $7/99 = 7\%$ responses of Racist. Amongst non-Whites, the average was the same as the overall, but $2/24 = 8\%$ of selected Racist. This is slightly higher than the overall rate (with the caveat about small number statistics), and this should be monitored going forward.
- Diverse → Homogeneous - The average was in the middle.
- Sexist → Non-Sexist - The average was in the Non-Sexist range. $5/25 = 25\%$ of non-Males responded in the Sexist range. **These results suggest improvements should be made to address a continuing feeling of sexism amongst a significant portion of the non-Males in the department.**

- Cooperative → Competitive - The average was between Cooperative and neutral.
- Homophobic → Non-Homophobic - Overall, the average response was non-Homophobic. The response from amongst those identifying as LGBTQ+ was non-Homophobic. There was one response of Homophobic from amongst the LGBTQ+ respondents, so this should be monitored.
- Unsupportive → Supportive - The overall average was Supportive. There were 6/98 = 6% responses of unsupportive.
- Welcoming → Unwelcoming - The overall average is Welcoming. The results from Non-Males and non-Whites were consistent with the overall results, suggesting a lack of bias against the non-majority in the aggregate. However, 8/99 = 8% selected Unwelcoming, of which 5 instances were from the non-majority. **This suggests that those in the non-majority are more prone to unwelcoming treatment.**
- Elitist → Non-Elitist - The average was between neutral and non-Elitist.

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.**

5e. 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 (100)	3	6	11	57	23	3.9	0.9
I have considered leaving the department because I felt isolated or unwelcomed (100)	50	21	14	12	3	2.0	1.2
My experience in the department has had a positive influence on my professional growth (100)	0	4	15	48	33	4.1	0.8
There is too much emphasis put on issues of diversity, equity, and inclusion in the department (100)	34	27	27	7	5	2.2	1.1
I have to work harder than others to be valued equally here in the department (100)	29	29	20	17	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 (98)	2	5	24	41	26	3.9	0.9
The department provides sufficient resources to foster the success of its members (100)	2	12	15	44	27	3.8	1.0
I am treated with respect in the department (99)	1	2	11	43	42	4.2	0.8

Interpretation:

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). $58/100 = 58\%$ agreed that they have to work harder than others to be valued equally.

Looking beyond averages, **there are areas with responses for which the department should work towards improving.** This includes $9/100 = 9\%$ that do not feel valued as an individual in the department, $15/100 = 15\%$ that have considered leaving the department of feelings of isolation or unwelcomeness, and $7/98 = 7\%$ that do not feel like they belong to a community in the department.

5f. 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 (100)	74	20	6
Undergraduates (18)	16	1	1
Grad Students (48)	31	13	4
Postdocs (4)	4	0	0
Faculty (21)	15	5	1
Staff (8)	7	1	0
Male (71)	60	7	4
Non-Male (20)	10	8	2
White (58)	46	8	4
Non-white (25)	17	6	2
LGBTQ+ (4)	4	0	0
Disabled (12)	10	2	0

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.

Responses:

Identity aspect leading to unfair treatment	Times checked
Sex	11
Age	5
National origin	5
Social class	4
Racial or ethnic identity	3
Ability or disability status	2
Gender identity or expression	2
Political orientation	1
Religion	1

Interpretation:

A total of $26/100 = 26\%$ of respondents reported experiencing being treated unfairly in the department. This includes $2/18 = 11\%$ of undergraduate respondents, $17/48 = 35\%$ of graduate students respondents, $6/21 = 29\%$ of faculty respondents, and $1/8 = 13\%$ of staff. **The results suggest that occurrences of unfair treatment are common.**

By gender, $11/71 = 15\%$ of males and $10/20 = 50\%$ of Non-Males reported unfair treatment. **This suggests that the gender disparity in unfair treatment is significant.** By race, $12/58 = 21\%$ of White respondents and $8/25 = 32\%$ of non-White respondents reported unfair treatment. **This suggests that the racial disparity in unfair treatment is significant.** Disabled respondents reported $2/12 = 17\%$, and LGBTQ+ had not reports of unfair treatment. **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-White, so addressing the experiences of these minority groups is crucial.** 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.**

The identity aspects that led to the reporting of unfair treatment were broad, with seven different aspects selected at least two times and two others selected once. Each aspect is important to address, but **the most common were sex, age, national origin, social class, racial and ethnic identity, ability or disability status and gender identity or expression.**

It is challenging to assess the results in comparison to other departments or schools because there are not many data sets to compare to. In a recent survey (https://www.eurekalert.org/pub_releases/2019-04/aps-wcp041819.php) of 471 undergraduate women that attended the American Physical Society's Conference for Undergraduate Women in Physics (CUWiP) 2017 meeting, it was reported that 73% of undergraduates experienced gender harassment at their home institutions over the previous two year period. It is difficult to compare our results with the APS study because the APS question was about “gender harassment” while our question was about “unfair treatment” (which may include instances of “gender harassment”).

5g. Suggestions for Improving DEI

“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?”

- 31/101 respondents provided an answer to this question.
- 7 said they had no suggestions. 1 of these (from White Male undergraduate student) said “The department is great!” and 1 (from White Male graduate student) said “the department is welcoming and appropriate.”
- 3 people said to make training mandatory for every member of the department (the DEI committee notes that this is already true, so perhaps helping to educate department members more about this). 2 of these people added there should also be a mandatory DEI workshop for all faculty and graduate students.
- 3 people said to continue to talk about it and to help people feel comfortable talking about it, especially in conversations between faculty and students, even during class.
- 2 students suggested taking student complaints seriously and having an open and anonymous complaint submission process.
- 3 people mentioned recruiting and hiring (reaching out directly to disadvantaged and minority communities, would like to see more women recruited and represented in the department, accept more graduate students that belong to marginalized communities)
- 2 comments seemed to indicate less concern for DEI issues, 1 said that research and education quality should be the priority instead of anything else (faculty, non-reported gender or ethnicity) and 1 said to stop worrying about issues that are non-existent (graduate student, male, asian)
- Other comments (paraphrased)
 - Have more off-site social events, socialize more around colloquia.
 - It would be nice if more people attended DEI journal club, though the people most likely to benefit are least likely to attend.
 - Department leadership should give motivational presentations to explicitly state the importance of DEI and set the tone for the department
 - Just be nice, keep an open mind, be upfront, hire people with a philosophy of DEI
 - Make sure there is an ability to display pronouns
 - Better work life balance for faculty
 - Educate oneself through reading DEI relevant books
 - Point out DEI successes in addition to failures. Sometimes it seems the department thinks everyone is doing a terrible job.

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

- 23 people responded to this question
- 12 were generic positive (“Good,” “I’m happy to be part of a department that’s seeking to improve in this area,” “Keep up the good work,” “glad the department is taking these

issues seriously with having a committee and survey,” “thanks for doing this,” “I hope more diverse representation at all levels... will result from these efforts,” “looks good on the department to be working on these things, [e]ven if some might be annoyed by the required trainings”); 1 named certain faculty as doing a good job for DEI.) 1 respondent in this area also said “to keep this very important initiative going.” 1 person said that the intention is in the right place but more direct action could be taken.

- 3 expressed issues with the survey. 1 was an issue with the question on sexual orientation. 1 said this survey only asked about the last 12 months, but this is the first survey and some issues go back years (graduate student, male, underrepresented minority). 1 said this survey isn’t going to capture isolated incidents that still need attention. Problems are not overwhelming, but they do still occur.
- Needs of graduate students not often acknowledged by faculty. It would be nice for graduate students to be consulted in more decisions like recruiting, qualifying exam, advisor relations, TA trainings, etc.
- Have workshops for faculty to mentor them in working with international students.
- There isn’t much outright hostility to DEI issues, but it seems that some parts of the department regard DEI issues as a joke or irrelevant to the functioning of the department. Even disregarding the moral aspects, an argument can be made that tackling these issues are important on a pragmatic level, as it will help the department will attract more students and make it easier for everyone to focus on their work (graduate student, white, male)
- Advertise graduate program more broadly
- There is no perfect system when dealing with people, but the department is being as inclusive as possible.
- 1 undergraduate (white, male) expressed a problem with a professor being “borderline abusive,” such that this student felt incapable of studying physics and has spent time in therapy attempting to cope.
- 2 comments were negative. 1 (graduate student, non-reported gender or ethnicity) said no one has time to think about thinking but funding and publishing. 1 (graduate student, male, asian) said to focus on science and stop wasting time on issues that don’t exist.
- 1 person (graduate student white male international) mentioned an incident in which he did not feel treated with respect by an individual faculty member (did not mention DEI issues).
- 1 person (undergraduate, white, male) noted that our region is one of the least diverse in the nation, so that may be influencing the makeup of our department as well.

WVU Department of Physics & Astronomy Climate Survey 2019

The WVU Department of Physics & Astronomy Diversity, Equity, & Inclusion Committee is tasked with annually assessing the climate of the department. (This differs from the climate of the university as a whole - this survey specifically addresses 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.

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

15. If you answered "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. 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?

17. 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: _____

18. 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: _____

19. 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: _____

20. 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

21. 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.

22. 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

23. 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

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

