

LSU Department of Physics & Astronomy 2022-23 Climate Survey Report

Executive Summary

In March 2023, the Physics and Astronomy (P&A) Department's committee for Diversity, Equity, Inclusion, and Accessibility (DEIA) conducted a climate survey of all its members: undergraduate and graduate students, faculty, postdocs, and staff. To avoid small groups, in this report we have combined all teaching faculty (instructors, tenure track, and tenured) as "faculty", all non-teaching staff (administration staff and postdocs) as "staff," and all students (undergraduates and graduates) as "students," unless indicated otherwise. The main conclusions from the survey are:

- The vast majority of respondents (90%) considered the department to be welcoming. Eleven respondents (8%, including students, staff, and faculty) were neutral and two (2%, all staff) disagreed with that statement.
- In almost all questions of the survey staff consistently reported poorer experiences than faculty and students in the department, often by a significant margin.
- Nine people (equally comprised of all cohorts) reported considering leaving the department because they felt isolated or unwelcome, four of which identified as male.
- Eleven people agreed with feeling intimidated in the department, with most of them identifying as female + non-binary (9) and students (8).
- There was a 70% increase in total responses to this survey compared to 2022 P&A climate survey, driven by a significant increase in student participation (from $\approx 35\%$ in 2022 to $\approx 58\%$ in 2023), most notably with undergraduate students. The faculty and staff response rate remained unchanged.
- Compared to last year, the gap in experiences of female + non-binary compared to male respondents has been closed for most of the survey questions and if not closed, then reduced for the other ones. The same is true for folks who witnessed but did not experience bad experiences compared to those who did not.
- Considering respondents, there is ethnic and racial diversity among faculty, staff and graduate students, however no undergraduate student respondent identified as Black/African American, far from Louisiana's population makeup (since most undergraduates are in-state students).

Recommendations

- Overall, improving the representation of all groups in departmental governance and events.
- Improving inclusivity among postdocs, *e.g.*, by including postdocs in department events such as interacting with prospective students/faculty candidates, encouraging postdocs to participate in committees, giving talks for colloquia, etc.
- Continue improving the climate among non-research staff via clearer communication, more inclusion, and supporting a respectful environment.

- Following feedback from survey respondents: improving/increasing the amount of teaching resources to student-facing department members. 20% of faculty disagreed or were neutral about having enough resources.
- The department should continue to strive for increased diversity to accurately represent national and state demographics (specifically among undergraduates), through the strategic recruitment, promotion, and retention of faculty and students. As the flagship, public university of Louisiana, we should strive to accurately represent the state.
- Improve awareness and understanding of differences through reminders of the Code of Conduct, broadly disseminating the annual Climate Survey, DEIA focused colloquia, and sharing lived experiences in the department with P&A members.
- Maintain participation in future departmental climate surveys.

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Survey context and purpose

Between 03/2023 and 04/2023 the Physics and Astronomy (P&A) Department's committee for Diversity, Equity, Inclusion, and Accessibility (DEIA) conducted a climate survey for the 2022-2023 academic year. The anonymous survey was open to all P&A members: undergraduate and graduate students, faculty, postdocs, and staff. All questions were optional.

Initiated in the academic year 2021-22, the 2022-23 survey corresponds to the second installment of a multi-year effort where the DEIA committee intends to conduct yearly polling to:

1. track the evolution of the climate at the P&A department,
2. get quantitative data against which they can evaluate the results of DEIA initiatives,
3. identify existing and emerging areas that require attention, and
4. compare LSU P&A department results to national data, where applicable.

Like in 2021-22, the 2022-23 survey covers four main categories, with:

1. generic demographic information,
2. generic questions about the climate in the P&A department,
3. generic questions about people's experience in the P&A department,
4. specific questions for each cohort in the P&A department.

The goal of yearly surveys is to gather quantitative and comparable data, to identify general trends in the P&A climate. Throughout the year, we also welcome individual comments, concerns, issues, etc., by reaching out directly to the DEIA committee using the P&A feedback form <https://forms.gle/XnETWYmBkmzu6Ciy6>. The feedback form may be filled in anonymously, but if a respondent provides their name, the committee will reach out to them, and provide assistance to resolve any issues.

Survey analysis and reporting

Survey data was analyzed with mindfulness and respect of identifying information (including within the committee) to maintain respondents' anonymity

- We did not look at individual response forms but used an automated parser that returns the number of respondents with a given response
- We assigned cohort-specific analyses to somebody on the committee who was not from that cohort.
- Next year and moving forward, we hope to externalize the first aggregation of data altogether and further reduce anonymity issues within the committee.

We could not guarantee the anonymity of respondents from cohort-specific questions and thus did not include detailed results in this report. We still used the results from those questions to inform our recommendations.

We will further analyze and communicate relevant trends and feedback via departmental channels (e.g., Chair, Steering Committee, GSO, etc.).

Respondents' demographics

In total 133 out of 312 people (44%) answered the 2022-23 survey with the breakdown of the respondents' demographics summarized in Figure 1 below. To maintain the anonymity of respondents and for enhanced readability of the figures, we aggregate responses into three main groups:

- students = undergraduates and graduate students,
- faculty = tenure-track and tenured professors, and instructors (*i.e.*, teaching LSU personnel),
- staff = postdocs, research faculty, and department staff (non-teaching personnel).

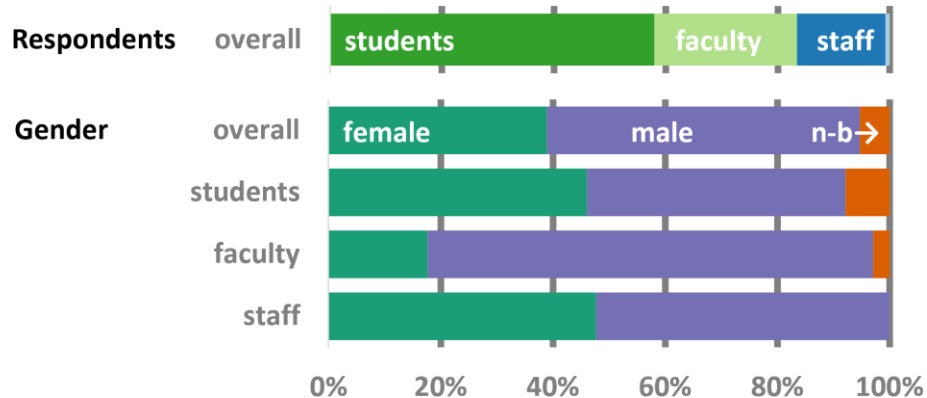


Figure 1: Demographics of the respondents to the 2022-23 P&A climate survey (“n-b” = non-binary). Not all respondents identified their cohort in the department (light blue strip on the right of the top bar).

Other notable statistics for the overall answers are:

- Ethnicity/race: 59% white; 19% Asian; 8% Hispanic/LatinX; 5% Black/African American (but 0% among undergraduates). We had a small number of respondents identifying as Native Hawaiian or Other Pacific Islander and American Indian/Alaskan Native.
- LGBTQ+: 18% of respondents identified as LGBTQ+. Immigration status: ≈29% were born outside of the US, ≈56% are US citizens.
- Miscellaneous: ≈18% of first-generation students, ≈17% grew up in low-income household, <5% primary care giver, <5% non-traditional students.

Observations from responses separated by demographics

- There were no Black/African American undergraduate respondents, a notable fact since a vast majority of the students are from Louisiana (so, either we have no Black students, or Black students did not respond to the survey –either conclusion is troubling). For reference, the [LSU College of Science](#) has 12% Black/African American undergraduate students, and AIP reports [4% of Physics Bachelor’s](#) degrees are awarded to African Americans.
- Among graduate students, although numbers are small, percentages of Black/African Americans (6%) are better than in data from AIP (for [graduate students](#) is <1% and for [faculty](#) 2%); although for graduate students, the percentage is smaller than [LSU Graduate School](#) (10% among doctoral students).
- Numbers for Hispanic/LatinX among undergraduates (8%) are comparable to CoS (8%) and slightly smaller than AIP data (11%); among graduate students and faculty percentages (6% and 9%

respectively) are better than both LSU (graduate school 4% and CoS faculty 4%) and AIP (4% graduate students and 3% faculty).

- Fewer non-white people than white people strongly agree with being valued as individuals and with the department encouraging self-confidence; significantly fewer non-white people felt like participants in departmental governance. The only people strongly disagreeing with feeling welcome in departmental discussions were non-white. On the other hand, slightly more non-white people agreed with their contributions being acknowledged.

Department climate

The climate portion of the survey consisted of 15 questions aimed at gauging the climate experience in the P&A department with a sample of responses shown in figure 2 – see the appendices for the results of all questions.

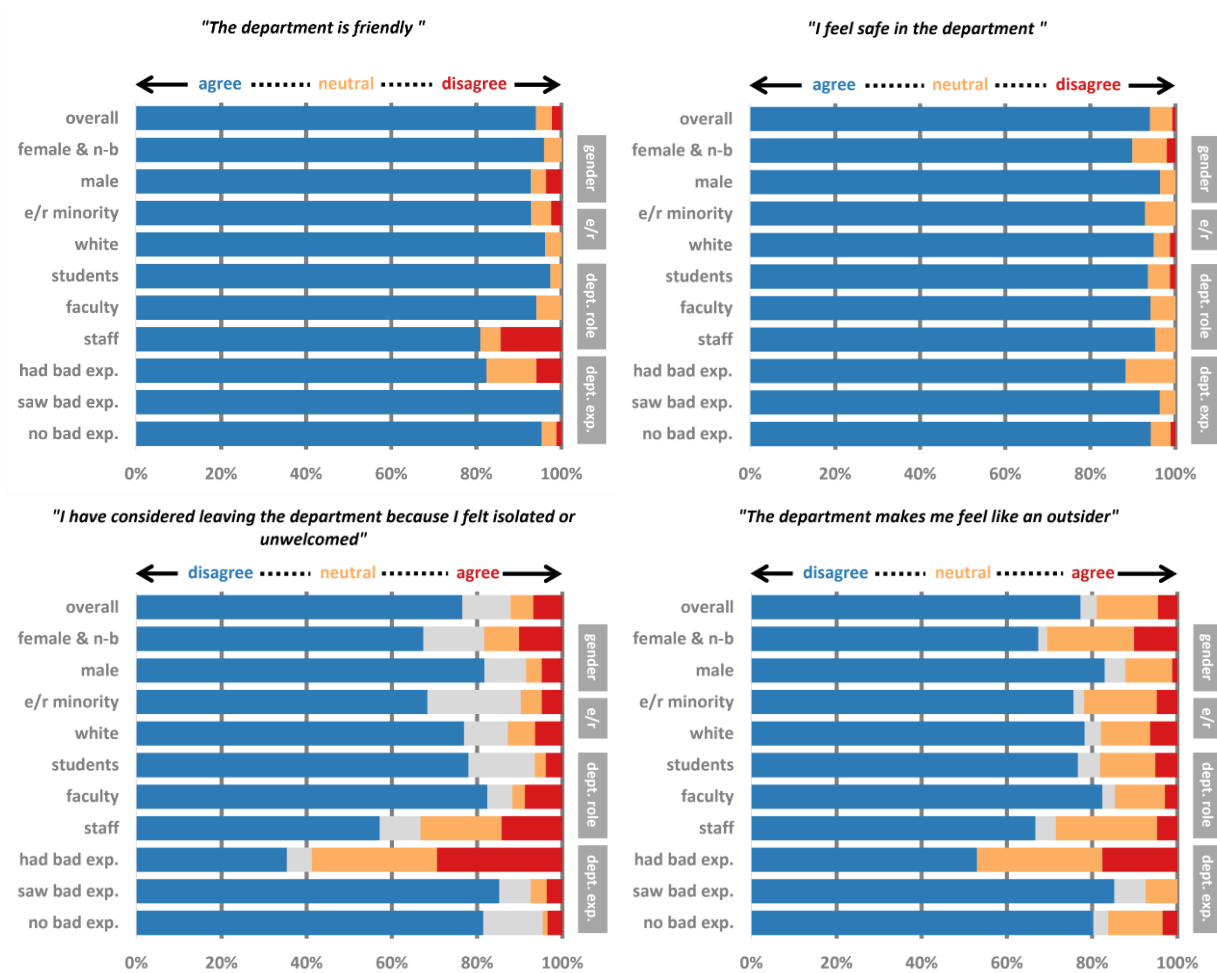


Figure 2: Results from four questions in the climate section of the of the 2022-23AY P&A DEIA survey. In each panel, the agree-to-disagree axis is specified at the top and N/A answers are coded with grey segments. Note that the lower panels have an inverted disagree-to-agree scale for ease of comparison with upper panels. The label "e/r minority" represents those who identified as ethnic or racial minorities.

The climate portion of the survey consisted of 15 questions aimed at gauging the climate experienced by all members of the P&A department – see appendices for results of all questions. Key takeaways for the climate questions are:

- Most respondents (90%) considered the department to be welcoming; The percentage of people who disagreed is halved from last year's survey.
- In almost all questions of the survey, “staff” (including postdocs) consistently reported poorer outcomes than faculty and students in the department, often by a significant margin.
- Nine people (equally comprised of students, staff, and faculty) considered leaving the department because they felt isolated or unwelcome, four of which identified as male.
- Those who had a bad experience reported feeling more like an outsider in the department than those who did not.
- 46 respondents (35%) agreed or were neutral with the statement that there is too much emphasis put on DEIA in the department. 35 (35/46= 76%) of which identified as male.
- On the question “The diversity of invited colloquia and seminar speakers is appropriate”, 35 males and 11 female or non-binary individuals (35% of all respondents) disagreed with the statement.
- Sixteen respondents (at least one respondent from each cohort) were neutral or disagreed with the statement “I am treated with respect in the department”. Graduate students were the majority (38%), followed by postdocs (25%), non-research staff (19%), faculty (12%), and undergraduate students (6%).
- 100/133 = 75% of all respondents agreed that the department encourages self-confidence, 61% of which were students.

Experiences in the Department

Although the department climate is good as reported in the last section, there are negative experiences seen or felt by many members, and this is definitely a source of concern for the department. Some highlights from the responses:

- A significant fraction of the department (42 people, 32%!) felt a negative experience or saw somebody experiencing one; this included people in all groups (faculty, staff, students).
- Of these respondents, about a third had a negative experience themselves, again including people from all groups, although this fraction was larger among female/non-binary people (7% of all male respondents had a bad experience themselves, while 24% of all female/non-binary respondents did).
- The negative experiences were about half between faculty and students (reported by both groups of faculty and students!), a quarter between faculty and staff and a quarter between peers.
- Most of the negative experiences felt or seen were “not belonging”, but there were also many (12) who considered the experience as harassment (and this included all genders).
- About 93% of the people seeing or feeling negative experiences reported it to somebody, although only 6% reported it to the department chair or somebody with authority. Most people reporting the experience felt their concerns were taken seriously, but some did not.

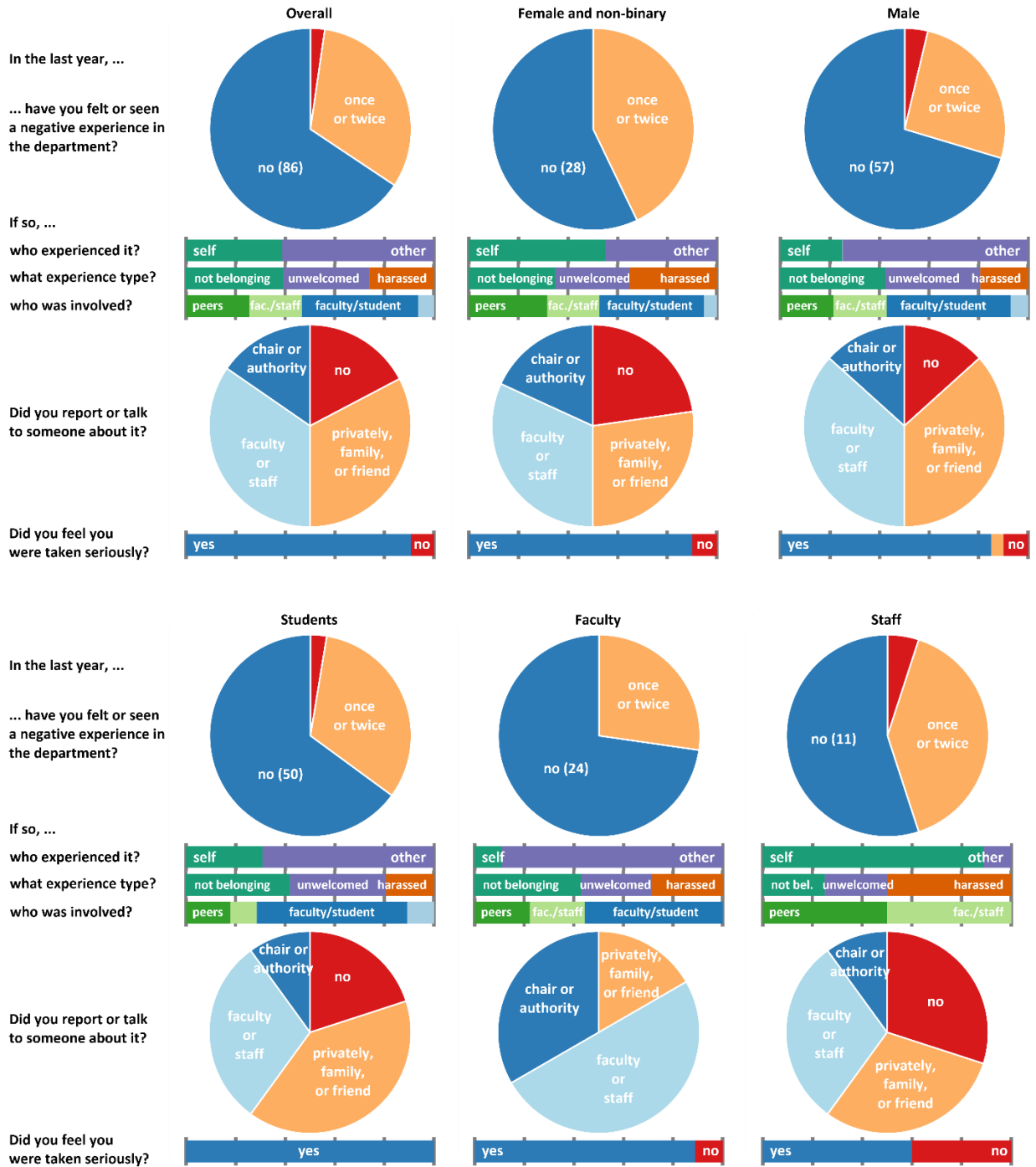


Figure 2: Experiences and reporting from the different cohorts/groups within the P&A department.

Comparison with the 2021-22 climate survey

Demographics:

- The participation of students in the survey surged to ≈58% (from ≈35% in 2022), largely driven by undergraduate students. Faculty and staff participation are roughly the same (respectively ≈45% and ≈50%). Taken together this led to a 70% increase in total responses to the 2022-23 survey 2021-22.
- The gender makeup is similar to the previous survey with slightly below parity of female + non-binary vs male respondents for students and staff while faculty has a 20%/80% ratio.
- ≈10% of respondents did not identify a race or ethnicity (0% in 2022) and the proportion of White respondent decreased to ≈59% (from ≈70%). Other ethnic and racial statistics are similar to 2022.
- The proportion of respondent who are/were first-generation students or grew up in low-income household almost doubled (respectively ≈18% and ≈17% in 2023, compared to ≈10% for both in 2022).
- The reported LGBT+ and immigration status (place of birth and US citizenship) are on par with the previous year.

Climate:

- By and large the results of the 2022-23 survey reveal meaningfully better reported climate than in the previous year.
- Most notably, the gap in climate experiences of female + non-binary compared to male respondents, and folks who witnessed (but did not experience) bad experiences compared to those who did not has been closed for most of the survey questions and reduced for the other ones. Individuals who had bad experiences continue to report worse climate outcomes than those who did not, but generally with less drastic differences.
- While we hope that these numbers reflect a general improvement in the P&A department, the large difference in some of those numbers suggests that this is probably not the full story. Nevertheless, the increased buy-in in the 2022-23 survey also suggests that its numbers should be closer to reality and should be used as a baseline in future years' survey.

Experiences:

- The fraction of those who had felt or seen negative experiences more than twice ("many times") has decreased greatly.
- More people reported their experiences within the department (faculty, staff, or person of authority) than last year.
- The general increase in reporting came along with a 73% increase in reporters feeling they were taken seriously.

Appendices

Below we provide the details of the results in each category.

Participation

We had 133 respondents, about 44% of the department. The largest participation was among staff (53% of all staff members), the smallest among students (36% of all students).

Demographics

Status in the department:

- Undergraduate students: 24/133 = 18%
- Graduate Students: 53/133 = 40%
- Postdocs: 10/133 = 8%
- Staff: 11/133 = 8%
- Faculty: 35/133 = 26%

Gender (Note: respondents could select more than one gender that they identify with):

- "Male": 83/133 = 62%
- "Female": 46/133 = 35%
- "Non-binary": 7/133 = 5%

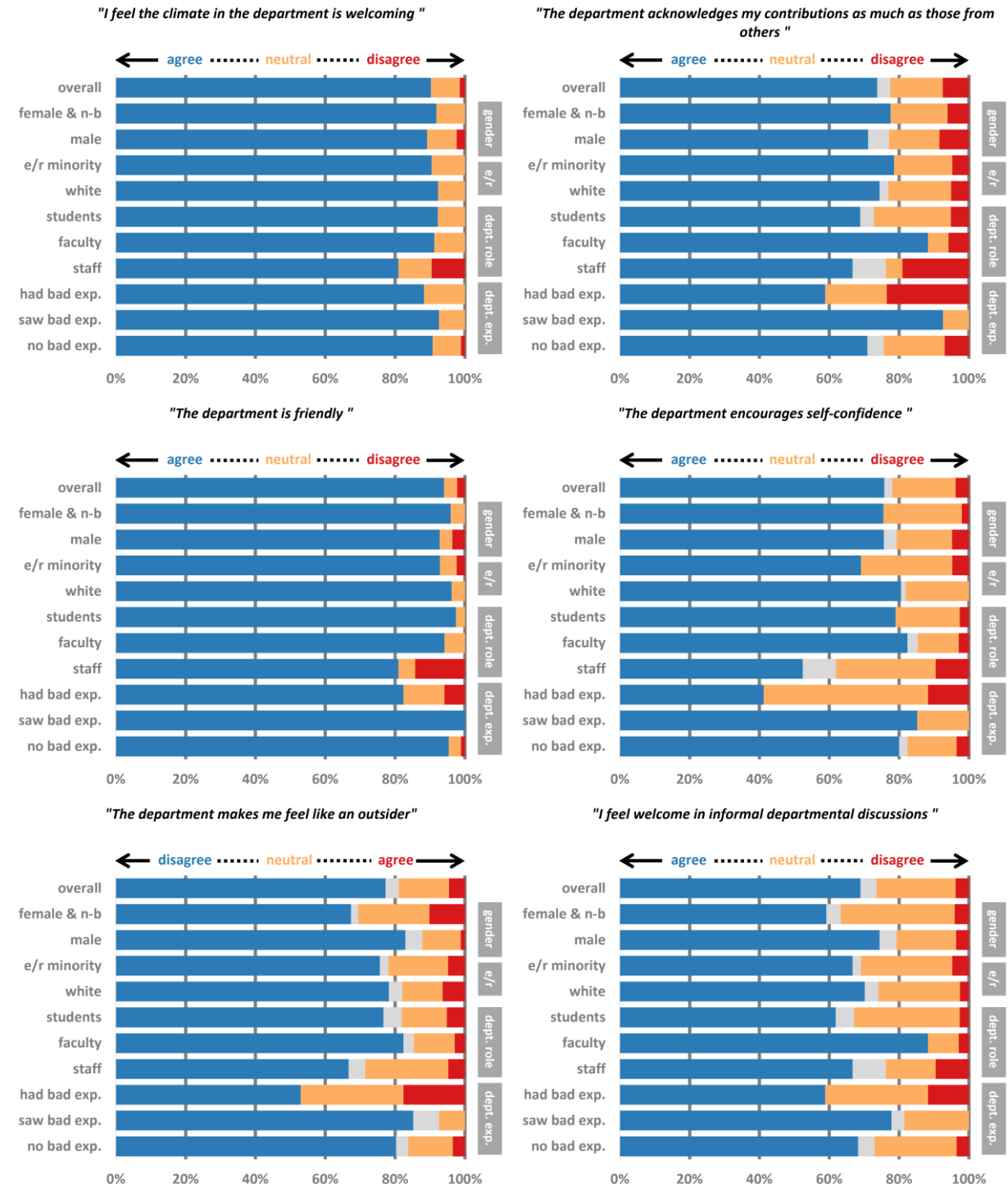
Identified ethnicity/race:

- "White": 78/133 = 59%
- "Asian": 25/133 = 19%
- "Hispanic/LatinX": 10/133 = 8%
- "Black/African American": 6/133 = 5%
- "American Indian/Alaska Native": <5%

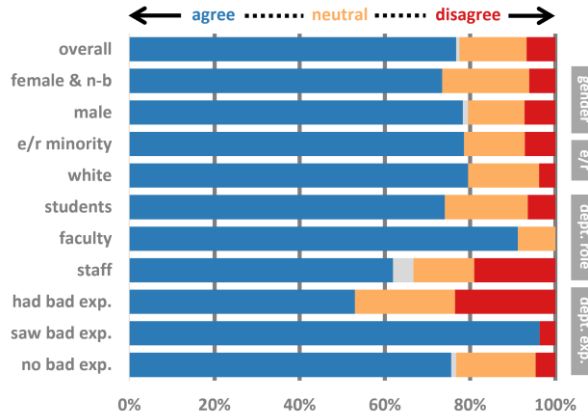
Unique circumstances:

- LGBTQ+: 24/133 = 18%
- Primary caregiver: 5/133 = 4%
- First generation college student: 24/133 = 18%
- Grew up in low-income household: 24/133 = 18%
- Non-traditional student: 2/133 = 2%
- Not born in the U.S.: 38/133 = 29%
- U.S. citizen: 75/133 = 56%

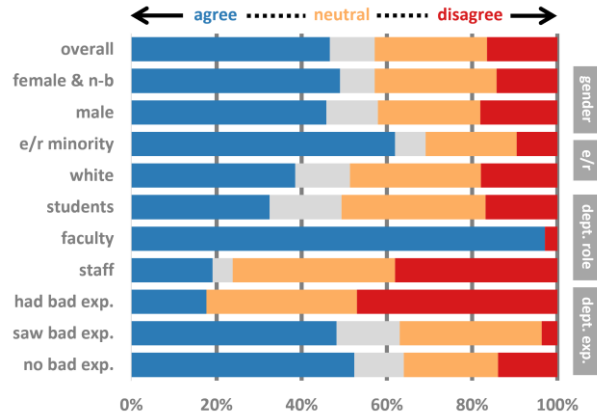
Climate



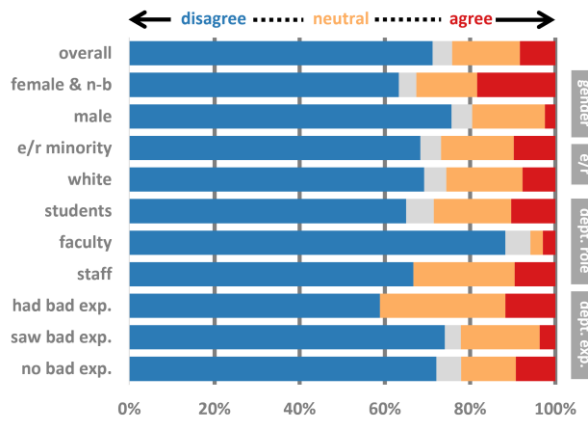
"I feel valued as an individual in the department "



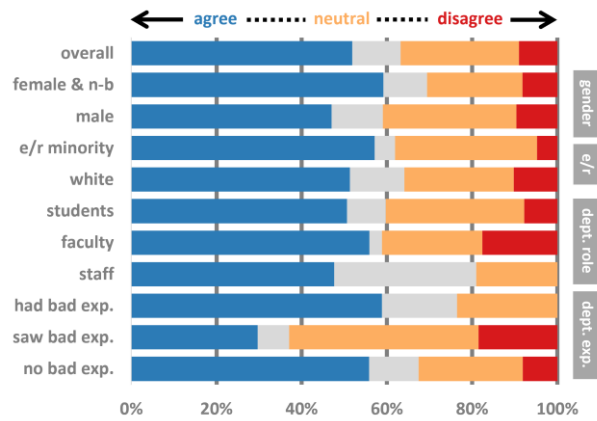
"I feel like a participant in departmental governance "



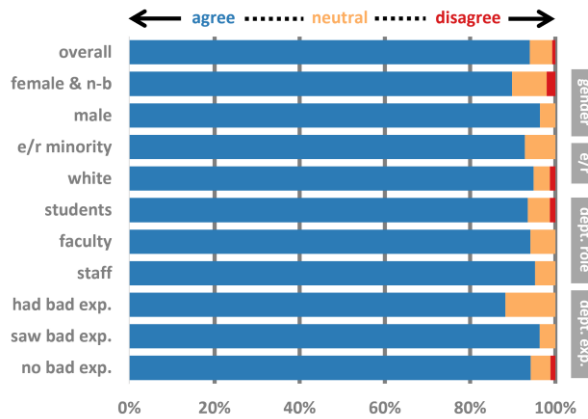
"I feel intimidated in the department "



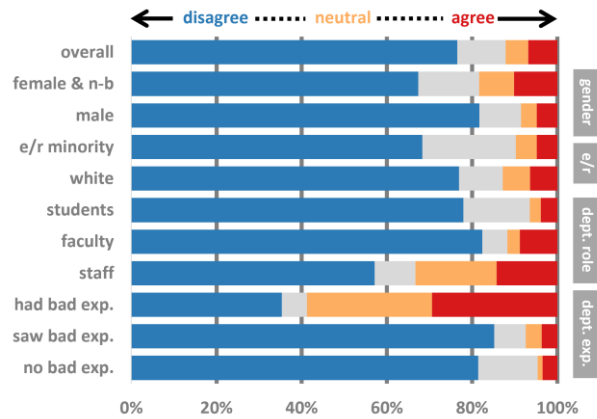
"The diversity of invited colloquia and seminar speakers is appropriate "



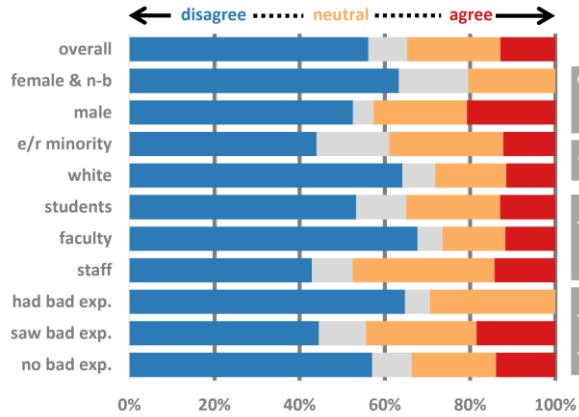
"I feel safe in the department "



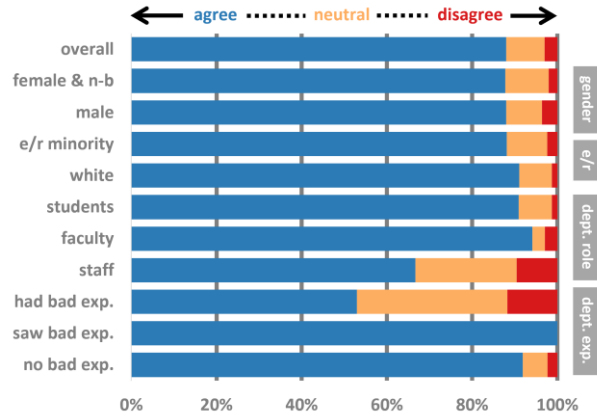
"I have considered leaving the department because I felt isolated or unwelcomed "



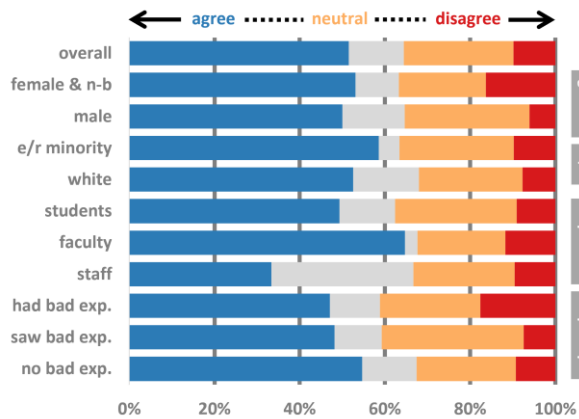
"There is too much emphasis put on issues of DEIA in the department"



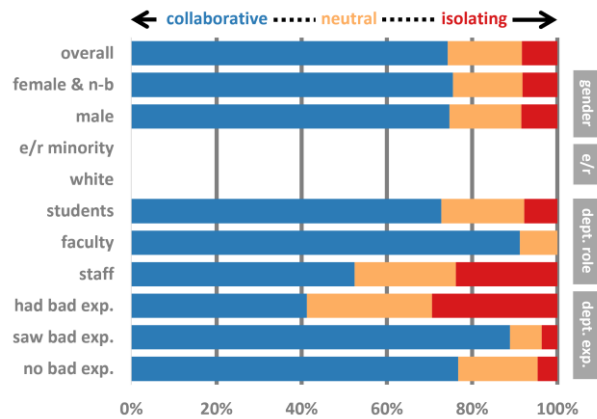
"I am treated with respect in the department"



"I feel there is sufficient shared leadership in department committees"



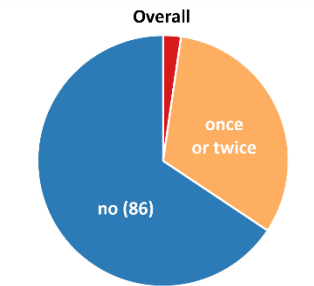
"I find interactions among peers are generally ..."



Experience in the P&A department

While most of the respondents found the department welcoming and friendly, some individuals did have negative experiences. 45 (34%) respondents reporting seeing or experiencing a negative experience in the department. Three of those respondents reported negative experiences more than twice though ("many times").

In the last year, ...
... have you felt or seen a negative experience in the department?



If so, ...
who experienced it?
what experience type?
who was involved?



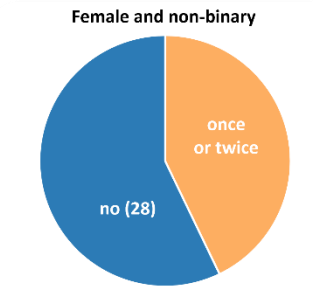
Did you report or talk to someone about it?



Did you feel you were taken seriously?



In the last year, ...
... have you felt or seen a negative experience in the department?



If so, ...
who experienced it?
what experience type?
who was involved?



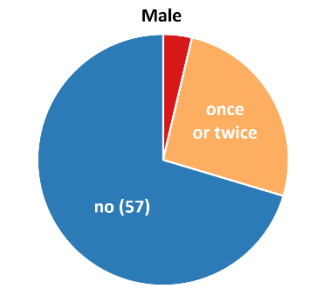
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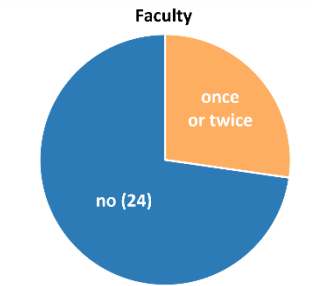
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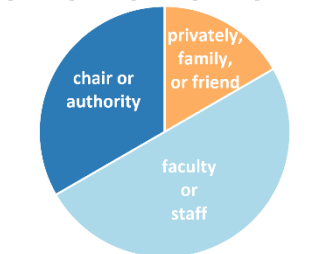
In the last year, ...
... have you felt or seen a negative experience in the department?



If so, ...
who experienced it?
what experience type?
who was involved?



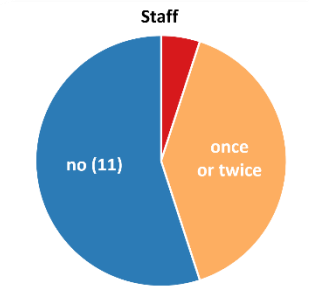
Did you report or talk to someone about it?



Did you feel you were taken seriously?



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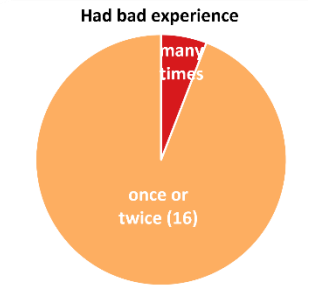
Did you report or talk to someone about it?



Did you feel you were taken seriously?



In the last year, ...
... have you felt or seen a negative experience in the department?



If so, ...
who experienced it?
what experience type?
who was involved?



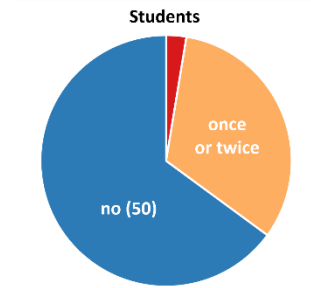
Did you report or talk to someone about it?



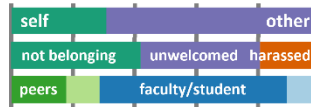
Did you feel you were taken seriously?



In the last year, ...
... have you felt or seen a negative experience in the department?



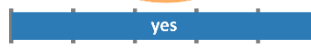
If so, ...
who experienced it?
what experience type?
who was involved?



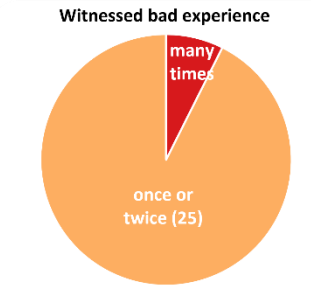
Did you report or talk to someone about it?



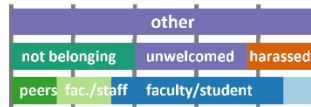
Did you feel you were taken seriously?



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If so, ...
who experienced it?
what experience type?
who was involved?



Did you report or talk to someone about it?



Did you feel you were taken seriously?



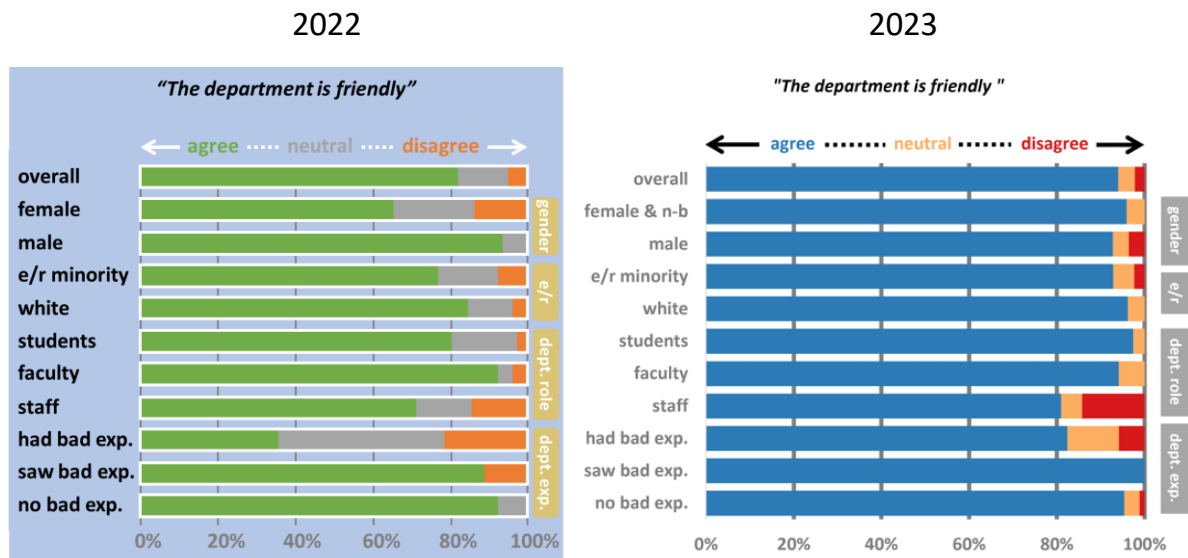
Comparison with P&A 2022 survey

Response was much better: 133 respondents vs 78 last year; largest increase was in undergraduate students (but still the group with smallest participation).

	2020 (%)	2022 (%)	2023 (%)	2023 (#)
Faculty	46%	41%	45%	35/77
Staff	42%	35%	48%	11/23
Postdocs		33%	59%	10/18
Graduate students	41%	27%	45%	53/117
Undergraduate students	~25%	~5%	24%	24/101
Total	122/327 = 37%	77/320 = 24%	43%	133/312 = 43%

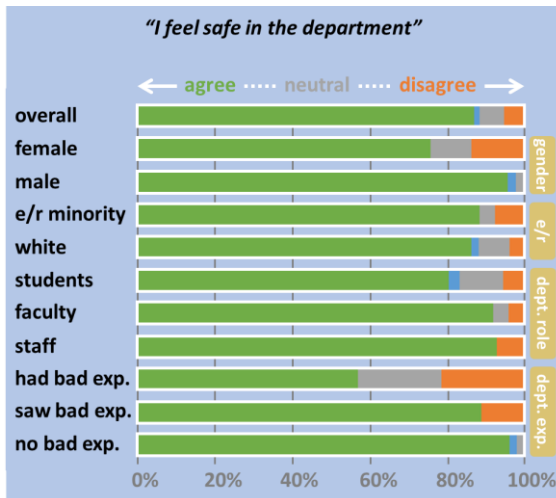
Table 1: comparison of the participation of the different groups in the P&A department for the 2020 and 2022 climate surveys.

Comparisons of climate questions

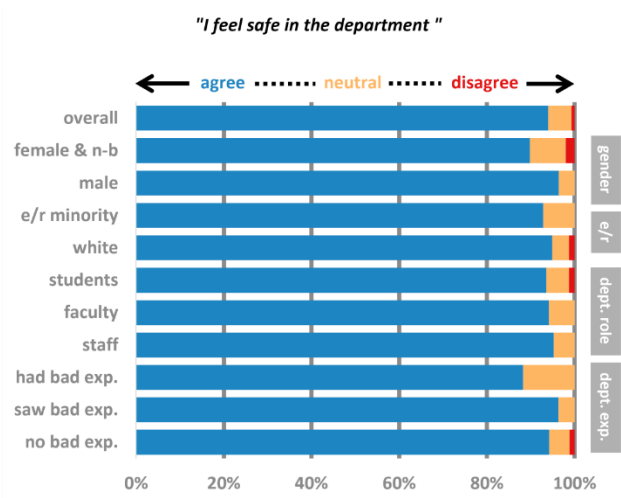


- Overall: better (in 22, 4/76 = 5% disagreed; in 23, 3/133 = 2% disagreed).
- Gender difference flipped (but beware of small numbers)
- Racial/ethnic difference persists (but beware of small numbers)
- Large difference with staff (including research staff) persists.

2022

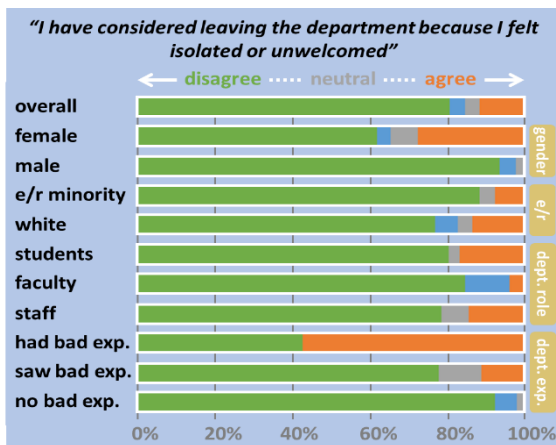


2023

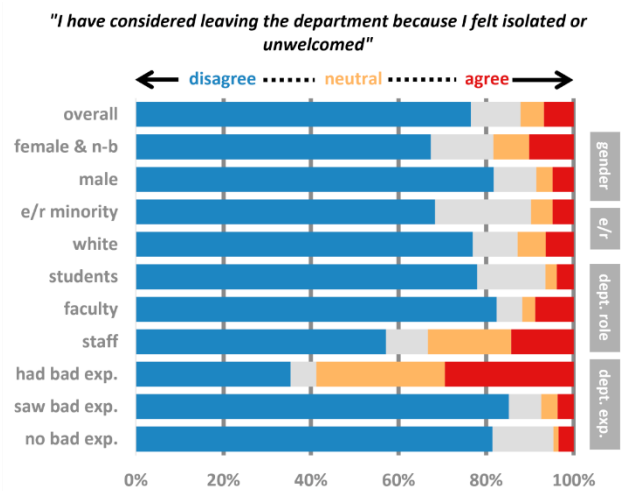


- Better but not good yet, disagreed fractions halved from last year, disagrees were and are female.

2022



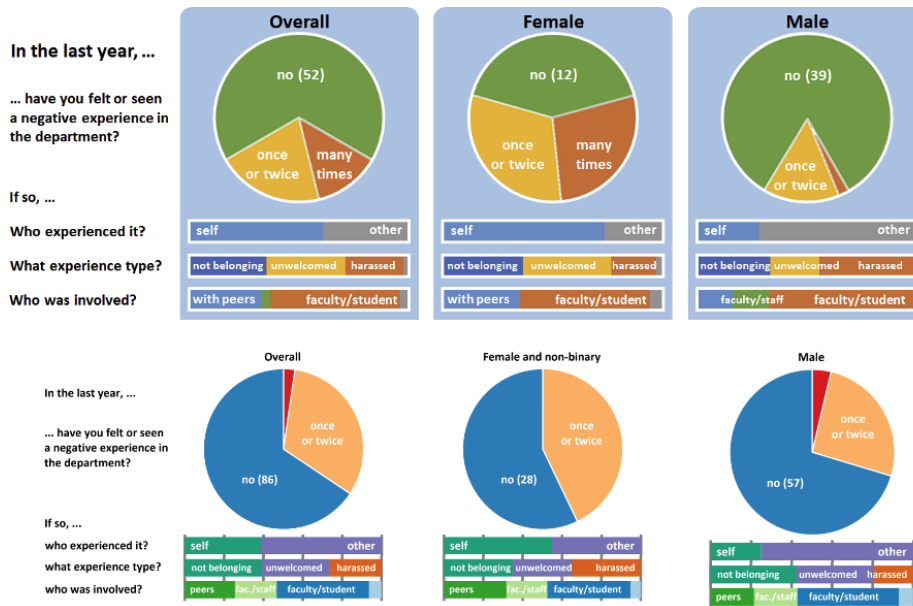
2023



- Response to this question is more negative this year: in 2022, 4% people considered leaving the department; in 23, 7% people did (there were some in almost all categories: graduate/undergrad/postdoc/staff/tenured/tenure-track).
- In 2022, all people considering leaving the department were female + non-binary; in 23, about half were male and half were female + non-binary (but this is a relatively larger fraction of respondents among female & nb).
- In 2022 and 2023, there were no significant differences among ethnic/racial groups.

Comparisons of experiences in the department

- Both in 2022 and 2023, about 30% of the respondents felt or saw somebody feeling a negative experience in the department; but in 2023 most people only saw it once or twice (as opposed to many times).
- The gender difference was smaller in 2023 (more than half of both females and males did not see or felt negative experiences), but still significant: the fraction of female feeling negative experiences themselves was more than twice the fraction of males, both in 2022 and 2023.
- Both in 2022 and 2023, 6 people reported seeing or experiencing harassment (this is a smaller fraction in 2023). In both cases, half felt harassed themselves.
- The fraction of negative experiences among faculty/staff was larger this year than last year.



Quotes from respondents

[Undergrad] This may not pertain to inclusivity, but I find the available resources for upper level physics courses are very sparse. I understand they're harder to find tutors/grad students for, but the tutoring center is advertised throughout the department for courses I haven't had for two years.

[Grad] I have seen some advisors be very demanding of their research students during the students' first semester. This makes the student feel overwhelmed and unwelcome when they are clearly not in a place to be focusing too heavily on research, and it can cause them to leave their research group. Every advisor should be trained to be conscious of how they interact with their research students, since not every student has the temperament to stand up to a bully when that bully is their boss.

[Staff] I see that it does not matter who you are as far as diversity goes. But you only have what you have to work with. You can help that along, but there is no way to force it. If you don't have the so called certain type of person that is also qualified, then you just don't have it. You can't force someone to be a physicist. You are stuck with what you have in the market of the times.

[Tenured] I would wish for more balance in the highlights about students that are on the website and the big screens in the department - they strike me as over-representing gender/racial minority examples

[Undergrad] I feel the faculty is very diverse and welcoming. The undergraduates however, I feel are not diverse. They are all very welcoming and collaborative.

[Undergrad] For the most part, it's great! A few of the faculty need to be nicer but all in all great!

[Postdoc] Include postdocs in the department events such as interacting with prospective students/faculty candidates, encourage postdocs to participate in committees, giving talks for colloquia

[Tenured] We should have more all-hand activities

[Grad] Mandatory Safe Space training for all faculty. Research advisors and professors need to know how to treat queer people with respect.

[**Grad**] It's one of the most wonderful climate I ever experienced:)

[**Grad**] 1. Having more diversity in the faculty would definitely help.

2. Another thing that could help is more social events with students and faculty, as some people might feel isolated or alienated simply because of a lack of interaction. Interaction with faculty in a casual setting is definitely a good icebreaker.

That said, the department is already doing great in terms of inclusivity. Good job!

[**Tenured**] More mentoring of faculty

[**Tenured**] The department is very welcoming from my experience. This single incident involving a single person does not reflect negatively on the department as a whole or its culture of collaboration and collegiality.

[**Grad**] I think it is inclusive and welcoming enough.

[**Undergrad**] I think this hyper focus on diversity, and all the other words to describe this stuff should be toned down. I feel as though this department is so strong and that everyone I'm their position should be there because they have earned it not in some goal to be diverse. Every position and seat taken in the department should be the best person for the job, and I think the department does this already, so if there is no exclusion that is currently taking place and we all know that the department has the goal of academic excellence, why is this diversity and inclusion being singled out. This department is one of the best on the campus and if everyone is just trying to progress their career or knowledge that anybody's "identity" matters. We're all different that's a given, but we all got here therefore we are all LSU tigers and that's all that really matters.

[**Undergrad**] Get rid of the fifth column whose existence is an implicit accusation of department members' misconduct, actively distracts from our shared scientific and economic objectives, and does great harm to the interests it seeks to promote.

The very idea that interactions between people is anyone's business beyond those interacting is risible prima facie, and sets a dangerous standard for the appropriate scope of departmental action. If an action or pattern of action is in clear, flagrant contrast to the department's *raison d'etre*, let the aggrieved raise those concerns on a case-by-case basis. A department, after all, is merely an instrument for organizing

collective, voluntary action towards the common interest of its members; the behavior of the department, and, by extensionality, the behavior of its members, is regulated exclusively by voice and threat of exit (cf. Hirschman). It is not clear to me at all that a DEI committee will, on balance, be more effective in wielding voice and facilitating exit than the natural, dynamic processes according to which the department is already naturally organized.

It certainly doesn't seem that infractions either so minor or so rare that they demand climate surveys to detect (and I would dispute even the assertion that past results unambiguously demonstrate the existence of even one bona fide infraction) warrant even the time they occupy, much less the myriad hidden harm that's diffuse and difficult to quantify.

[Staff] While I understand there is content not necessarily relevant to all employees in the department being discussed at the faculty meetings, there is ALWAYS also content that is relevant to everyone. I think there should be monthly departmental meetings and if there is a reason to exclude staff, a portion of the meeting at the end could be faculty only. There are a number of staff positions that have no formal contact with department leadership.

[Undergrad] There are a few faculty members who have difficulty communicating with undergraduates because they do not listen to what the students are saying in conversation.

[Grad] The department lacks accessibility for individuals with mobility needs. To truly understand the issue, I recommend attempting to navigate from Tower Drive to the 4th floor of Nicholson Hall using a wheelchair. Additionally, there appears to be a shortage of staff which is leading to negative interactions between staff and students. It's important to prioritize gender diversity in both hirings and colloquium speakers. Unfortunately, we lost one great PhD student last year due to feeling unwelcome and struggling to work with their research group, and another is expected to leave this year for similar reasons. Both students left the department with a master's degree. Additionally, it has been brought to my attention that a faculty member has paid a female student a lower salary of 24k, despite other students on the team receiving higher pay. She did not feel comfortable confronting the faculty member about the pay discrepancy.

[Grad] Involve the graduate students more on discussions/issues with the graduate school that affect us such as healthcare discussions, pay, etc.

[Postdoc] According to me the department is very welcoming.