Supporting LGBT+ Physicists & Astronomers: Best Practices for Academic Departments

LGBT+ Physicists
lgbtphysicists.org

and

AAS Working Group on LGBTIQ Equality (WGLE)
wgle.aas.org

v. 2.1

February 15, 2014

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Physicists & Astronomers:
Best Practices for Academic Departments

Introduction

When physicists and astronomers discuss issues related to diversity or broadening participation in the field, the focus is typically on creating support mechanisms for women or people of color. However, scientists who identify as lesbian, gay, bisexual, or transgender (LGBT) are also a minority within the physics and astronomy communities and can find themselves marginalized in a variety of ways. This document aims to highlight opportunities for making academic departments more inclusive for LGBT+ students, staff, and faculty. (We add a plus symbol to remind ourselves that not everyone fits neatly into the LGBT constructs, and some may identify differently.)

Even if you consider your department to be a safe and welcoming space for LGBT+ students and staff, it is important to note that the campus environment is often perceived differently by different groups: A 2003 study of campus climate[1] found that, while 90% of heterosexual students classified their campuses as friendly, 74% of LGBT students rated the campus climate as homophobic. LGBT staff and faculty routinely report that their campuses are more homophobic than reported by students. A 2010 study[2] found that 23% of LGB respondents had been harassed within the past year, with even higher rates (31–39%) for transgender individuals. Around half of all LGB students and two-thirds of transgender students had avoided disclosing their identity to avoid harassment.

LGBT+ youth are particularly vulnerable: they make up an estimated 40% of homeless youth[3] and are four times more likely than their straight

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[1] S. R. Rankin. 2003. *Campus Climate for Gay, Lesbian, Bisexual, and Transgender People: A National Perspective*. New York: National Gay and Lesbian Task Force Policy Institute.

[2] S. R. Rankin, G. Weber, W. Blumenfeld, & S. Frazer. 2010. *State of Higher Education for Lesbian, Gay, Bisexual and Transgender People*. Charlotte, NC: Campus Pride.

[3] L. E. Durso & G. J. Gates. 2012. Serving our youth: Findings from a national survey of service providers working with lesbian, gay, bisexual, and transgender youth who are

peers to attempt suicide[4]. Nearly half of transgender youth have seriously considered suicide and one quarter report having made a suicide attempt[5]. This is not to say that LGBT+ students are inevitably in crisis when they enter our departments – most arrive on campus with an astonishing amount of resilience – but it is important to be aware of the issues that might have affected them in high school and might continue to do so throughout their university career.

The argument for inclusion is simple: science advances fastest when the best scientists are free to apply their intelligence and imagination to the exploration of the universe without limits and without fear. Sometimes, the best scientists are LGBT+. Institutions that are viewed as unfriendly to LGBT+ people quickly find themselves at a competitive disadvantage. When LGBT+ scientists leave our departments to work at other institutions, our students, our scholarly communities, and our own research suffer. Furthermore, a more inclusive workplace has advantages for all of us: greater flexibility to perform our work, greater support for work/life issues, and greater freedom to be ourselves.

Research has shown that the presence of "difference" on campus is important to the intellectual and social development of the majority[6,7]. Specifically, students who interact with people different from themselves show more developed critical and creative thinking, improved cross-cultural relationships, and increased volunteerism and civil activism. Love[8] also found that stu-

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homeless or at risk of becoming homeless. Los Angeles: The Williams Institute with True Colors Fund and the Palette Fund. Available at this URL.

[4]CDC. 2011. Sexual identity, sex or sexual contacts, and health risk behaviors among students in Grades 9-12: Youth risk behavior surveillance. Atlanta, GA: US Department of Health and Human Services.

[5]A. H. Grossman & A. R. D'Augelli. 2007. Transgender youth and life-threatening behaviors. *Suicide and Life-Threatening Behaviors*, 37(5), 527-537.

[6]R. D. Reason, B. E. Cox, B. R. L. Quaye, & P. T. Terenzini. 2010. Faculty and institutional factors that promote student encounters with difference in first-year courses. *The Review of Higher Education*, 33(3), 391-414.

[7]H. Smith, R. Parr, R. Woods, B. Bauer, & T. Abraham. 2010. Five years after graduation: Undergraduate cross-group friendships and multicultural curriculum predict current attitudes and activities. *Journal of College Student Development*, 51(4), 385-402.

[8]P. Love. 1997. Contradiction and paradox: Attempting to change the culture of sexual orientation at a small Catholic college. *The Review of Higher Education*, 20(4), 381-398.

dents and staff who encounter contradictions in their own thinking around LGBT+ issues can develop greater levels of cognitive sophistication. The advantages of engaging with "difference" appear to continue beyond college and into the workforce[9]. In other words, a diverse department can improve your students' performance, make them better capable of functioning in today's multicultural workforce, and improve the reputation of your department.

Best practices for the inclusion of LGBT+ people on campus have been proposed by several authors[10,11,12]. In this document, we limit ourselves to recommendations that are particularly relevant to faculty and department chairs (as opposed to university administrators). After a brief glossary of terms, we offer both short-term and long-term department-level suggestions, then address recruitment and personnel issues. We conclude with recommendations for university-level policies that may guide conversations with institutional administrators. A list of useful external resources is available at the end of the document, along with the author list.

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[9]Smith et al.

[10]W. J. Blumenfeld. 1993. *Making Colleges and Universities Safe for Gay and Lesbian Students: Report and Recommendations of the Massachusetts Governors Commission on Gay and Lesbian Youth.* Boston, Massachusetts.

[11]Rankin. 2003.

[12]S. Windmeyer, S. Rankin, G. Beemyn. 2009. *Campus Climate Index.* campusprideindex.org.

CONTENTS

GLOSSARY

Generally the glossary appears at the end of a book. We put it at the beginning to illustrate the importance of using a common language to discuss GLBT+ issues. Use of this language will identify you as someone who has thought about these issues and may provoke important conversations with both GLBT+ and non-GLBT+ colleagues.

Some of the terms in this glossary may be unfamiliar; some familiar terms may have unfamiliar definitions. However, this language has evolved out of the literature and debates on gender and sexual diversity issues over the last few decades. The glossary's definitions are composites of widely used and accepted forms. They can be used as a launching point for the reader to understand the differences that exist between "day-to-day" use of the terms and more inclusive and explanatory definitions.

Bisexuality
Sexual orientation characterized by romantic and sexual attraction to both men and women.

Cisgender or Cis
Term referring to a person who identifies their gender to be in line with their *sex*. For example, someone who was assigned female at birth and identifies as a woman is considered to be cisgender.

Gay
Term referring to a person who is romantically and sexually attracted to people of the same gender. Formally referring to a man who is attracted to other men, the term can be and is often used by lesbians.

Gender
Gender refers to the roles, behaviors, activities, and attributes that a society considers appropriate for men and women. It is distinct from *sex,* which is a category defined at birth based on physical characteristics.

Gender Expression
How a person represents or expresses themselves in relation to gender – through the clothes they wear, their hairstyle, or their mannerisms. A per-

son's gender expression may not always match their *sex* or *gender identity* and can change from situation to situation or from day to day.

Gender Identity
An individual's private sense and personal experience of their gender. One's gender identity need not be in line with their *sex*. Most people find that their gender identity lies somewhere between the extremes of male and female; some individuals do not identify with either gender.

Gender Minority
An individual in a situation where their gender is not as widely represented as others. For example, a woman in physics is a gender minority.

Heterosexuality
Sexual orientation characterized by romantic and sexual attraction to individuals of another gender.

Homosexuality
Sexual orientation characterized by romantic and sexual attraction to individuals of the same gender.

Intersex
A *sex* assigned at birth for persons exhibiting physical characteristics of both males and females, usually due to variations in prenatal development.

Lesbian
Term referring to a woman who is romantically and sexually attracted to other women.

LGBT+
Lesbian, Gay, Bisexual, Transgender. The plus recognizes that not everyone fits their personal identity neatly into the LGBT constructs and may identify differently.

Out (of the Closet)
Openly identifying oneself as LGBT+. Someone may be out to some people but not to others (e.g., at school but not to family members, or vice versa). The decision to come out is highly personal. No one should be outed without

their explicit prior agreement, as this can be harmful and even dangerous.

Preferred Gender Pronoun
The pronoun or set of pronouns that an individual would like others to use when talking to or about that individual.

Queer
A former term of abuse that has been reclaimed by some members of the LGBT+ community as an identity that may be used in place of or in conjunction with other identities from the LGBT+ spectrum. Like all reclaimed words, it should be used with caution by persons outside of the community.

Questioning
An individual who is not yet certain of their sexual orientation or gender identity. Questioning is considered to be a legitimate identity in itself, and those who identify as such should not be coerced to "make up their minds."

Sex
A category, such as male, female, or intersex, assigned at birth based on physical characteristics.

Sexual Minority
A person in a situation where their sexual orientation is not as widely represented as others. For example, a gay male in physics is a sexual minority.

Trans*
An umbrella term used to describe the entire spectrum of people whose *gender identity* or *gender expression* does not conform to societal expectations or their *sex*. The term has been widely adopted by the community, is safe and respectful to use, and considered fully inclusive. (The asterisk serves as a sort of wild card.)

Transgender
An adjective used to describe someone whose *gender identity* does not match their *sex*. The term has been widely adopted by the community and is safe and respectful to use.

IMPROVING DEPARTMENTAL CLIMATE TODAY

Include everyone in social events

Department social events, whether on or off campus, are important opportunities for faculty, staff and students not only to network, but also to form a real community. Ensure that LGBT+ department members and their spouses, partners, and children are explicitly and implicitly invited to and welcome at these events, in the same way as their heterosexual and cisgender peers. For example, instead of inviting "spouses", **invite "spouses and partners" or "significant others"**. This practice is especially important for new department members and for newly out department members.

Use gender-neutral and inclusive language

While it is true that most people in our society are heterosexual and cisgender, not everyone is. The heterosexual and cisgender norm is often unwittingly reinforced through our use of language. This can leave LGBT+ people feeling excluded. Here are some suggestions for gender-neutral and inclusive language:

- Remember that there is a difference between a person's gender (culturally determined) and a person's sex (biologically defined). Gender

identity is not a binary, but rather a continuum.

- **Use gender-neutral pronouns and phrasing** such as "Bring your partner" instead of "Bring your wife", or "All students should bring their laptops" instead of "Each student should bring his laptop").

- **Always use the name and pronoun of a person's choosing**. If you are unsure which pronoun a person prefers, try to avoid using one until you can ask the person in private, "How would you prefer to be addressed?" or "What is your preferred gender pronoun?" At the beginning of a semester, distribute a form to all students which asks for their preferred name and pronouns along with any other information that an instructor might need (such as whether the student is on a sports team).

- **Avoid terms that sustain gender biases when describing titles or professions**. For example, use "chair" instead of "chairman", and "custodian" instead of "cleaning lady".

- Avoid defaulting to umbrella terms like "gay" or "homosexual." Use "LGBT" to refer to a broad community.

- **Do not assume all people have a heterosexual orientation**. Do not even make that assumption about everyone in the room.

- Remember that the term "sexual orientation" is preferred over "sexual preference"; the latter suggests a degree of voluntary choice that is not necessarily the case.

- Do not split the class by gender, e.g., "All the guys stand up."

Do not tolerate offensive language

As a department, adopt a policy that racist, sexist, homophobic, and ethnic slurs and jokes are unprofessional and will not be tolerated. Base the policy on the institution's non-discrimination statement and on the need for a departmental climate in which all are welcome and encouraged to do great science. Once a department embraces such a policy, peer pressure can do

most of the enforcement. Remind department members about this policy regularly. Make sure that incoming folks, especially graduate students, are aware.

In personal interactions, point out offensive language and ask that it stop. Make clear that such language is unprofessional and unwelcome in your department. Many people let homophobic language slide because they do not know what to say. Remember: saying something (even if it is not ideal) is always better than saying nothing.

Invite LGBT+ speakers to campus

One way to help those belonging to marginalized populations become more integrated into the academic community is to recognize them publicly for their professional accomplishments. This recognition provides other members of the community with role models with whom they can identify. The APS has, for years, publicized speakers' lists of women and minority physicists in order to encourage departments to diversify their colloquium and seminar series. Similarly, when a department invites a speaker from the LGBT+ community to make a research presentation, it simultaneously showcases that individual's work, provides them with networking opportunities in the department, and offers local students (and even faculty) a role model. It also enables the department to demonstrate publicly its commitment to inclusive excellence.

When **inviting a speaker to campus**, it is always good practice to arrange for them to meet with individuals or groups with whom they have common interests. For example, an invited speaker who is an expert in instructional methods may wish to meet with fellow educators. If you are hosting someone whom you know to be a public advocate for LGBT+ concerns, ask whether they are willing to meet with interested student or faculty groups, either formally or informally. Sharing pizza and conversation with the local chapter of oSTEM or the campus Women in Science and Engineering (WISE) group will be a valuable experience for all concerned. With the speaker's permission, **provide a mini-bio that references their interest in LGBT+ issues** as well as their scientific accomplishments; this will encourage a wider range of individuals to come to their talk or seek to meet with them.

Pay attention to course climate

Course climate refers to how welcoming a course as a whole is to students of all backgrounds and identities[1]: it is influenced by a number of factors, including choice of subject matter, attitude and language used by the instructor and TAs, and the nature of interactions among students. Each student may perceive the climate differently, experiencing anything from overt hostility or discrimination to implicit marginalization to an explicitly welcoming environment[2]. A student who identifies as a minority (interpreted broadly to include race, gender, class, LGBT+ status, religion, nationality) is particularly likely to experience a negative climate due to the use of stereotypes[3] and prior assumptions on the part of the instructor(s) about the students in the classroom. For instance, the student may overhear classmates using sexist, racist, or homophobic language, be the direct target of such remarks, or feel excluded by classmates during team projects or group work. Over time, these experiences can have a corrosive effect.

   Minority-identifying students may face additional hurdles to successful learning in a negative climate because their emotional reactions can disrupt their cognitive processes. If the classroom climate is hostile, they will be less likely to ask questions, join study groups, or attend faculty office hours and more likely to skip class sessions altogether; these patterns can lead students to lag behind and underachieve in the course. This can be exacerbated if the student has been experiencing rejection outside the classroom as well (e.g., lack of support from family or friends). Ultimately, affected students may lose their motivation to continue with their chosen discipline and switch to one where they perceive the climate to be more congenial[4]. Particular challenges exist for improving climate for LGBT+ students because they are less likely

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[1]A highly recommended review may be found in Chapter 6 of S.A. Ambrose, et al. 2010. *Why do student development and course climate matter for student learning.* In **How Learning Works**. 1st ed. Jossey-Bass.

[2]C. DeSurra, K.A. Church. 1994. *Unlocking the classroom closet: Privileging the marginalized voices of gay/lesbian college students.* Paper presented to the Annual Meeting of the Speech Communication Association.

[3]C.M. Steele, J.R. Aronson. 1995. *Stereotype threat and the intellectual performance of African Americans.* Journal of Personality and Social Psychology 69 (5): 797-811.

[4]B. Major, S. Spencer, T. Schmader, C. Wolfe, J. Crocker. 1998. *Coping with negative stereotypes about intellectual performance: The role of psychological disengagement.* Personality and Social Psychology Bulletin 24 (1): 34-50

to be visible than other minorities, discrimination against LGBT+ individuals is still pervasive, and relatively few role models of LGBT+ scientists are presently available.

To identify possible issues, provide anonymous feedback mechanisms for students to report climatic issues arising in the classroom. These should be in place and announced early in each term. It is helpful to have a standard slide for use on the first day of all classes in the department, identifying classroom standards and contact information for feedback or complaints. A departmental diversity liaison may facilitate this. If you believe there is a broader problem, consider having your institution's Diversity Office, Women's Resource Center, or LGBT+ Resource Center conduct a climate survey.

Discuss climate with faculty and TAs

The department should encourage faculty and TAs to educate themselves about the impact of course climate on minority students, and to make their classrooms more welcoming for them. Possible ways to raise awareness of this include: discussing the issue at a department meeting or teaching seminar, including a suitable book or article into journal clubs, or inviting an education researcher to give a colloquium. Some topics to discuss are the language used in the classroom, breadth of role models available to students, inclusion of welcoming language in course syllabi, and prior assumptions implicit in questions.

Instructors can create an inclusive learning environment within individual courses using a variety of research-based techniques. Some of these, such as interactive pedagogical methods, both increase the degree to which all students learn and also have been found to alleviate gender gaps in student performance in introductory physics classes[5]. Others are more specifically aimed at countering stereotype threats and other barriers to the success of students from under-represented groups. University Teaching Centers or LGBT+ Resource Centers may be able to provide suitable training sessions (e.g. for Safe Zone programs) or even fellowship programs to help instructors learn these techniques.

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[5]M. Lorenzo, et al. *Reducing the gender gap in the physics classroom.* American Journal of Physics 74 (2) 118

Encourage faculty to share examples with their colleagues and TAs of how they use these research-based methods to integrate positive diverse role models of physicists and astronomers into their classes. This can help build a more inclusive teaching culture in the department as a whole.

Discuss climate with advisees

Students and junior scientists who face a hostile climate – in the classroom, in the laboratory, or in the department as a whole – are often hesitant to raise the problem with an authority figure. They may worry that the climate is somehow their fault; that even terrible harassment is not bad enough to justify involving a busy, more powerful person; or that there is no possibility for positive change. They may feel pressure, external or internal, not to get a labmate or classmate into trouble, or they may believe that it is up to them to manage any harassment they face on their own. This type of problem almost never goes away by itself, however, and an instructor, supervisor, or department chair, or other identified liaison is a natural person to intervene in an unhealthy climate.

Encourage instructors, advisors, supervisors, and mentors to ask about climate in their regular meetings with students, trainees, or other junior scientists. Helpful questions include: Do they feel welcomed in the department or lab group? Is the climate at homework-help sessions conducive to their learning? Have they or others experienced harassment or belittlement by peers or by more junior or senior individuals? What kind of changes are needed? It is important to ask questions like these of everyone, since people may be targeted on many different grounds – sexual orientation, gender identity/expression, race, ethnicity, nationality, sex, disability, religion, etc. By expressing a sincere interest in junior scientists' experiences, mentors can indicate that they will listen sympathetically and are willing to take active steps to solve any problems that arise. Complaints must be taken seriously and a complainant should be able to expect an improvement in their circumstances. A harasser may or may not intend to harm, but that does not make their actions less damaging. No one should feel that they must hide their identity in order to study or work in physics or astronomy.

Ensure that there are also avenues for complaints outside the normal advising hierarchy. Undergraduate- and graduate-student liaisons are natural

candidates for this role, as are university trainers in diversity and ethics. Many departments have annual or semi-annual orientations, social events, or mailers, which are good opportunities to remind students, faculty and staff of the expectations of the department, and the resources that are available to them.

Understand departmental demographics

Consider how internal demographic information and/or demographic information from job applicants and prospective students may be collected in an inclusive way. Does the department's demographic form include a question about sexual orientation and a question about gender identity? Can respondents list a domestic partnership as a marital status? Are respondents limited to a binary, male or female identification, or can they write in how they self-identify?

Internal questionnaires may include such questions as

- What is your gender? Male / Female / Non-binary / Other:_____

- Do you consider yourself a member of the LGBT (lesbian, gay, bisexual, transgender) community? Yes / No

You may wish to include definitions of terms with the survey.

As with other diversity questions, responses to such queries provide valuable statistical information, but can also pose risks for the respondent. Survey responses should be anonymized; forms with these questions should clearly indicate what will happen to the data so that respondents can feel confident about how their answers will be used. All such data should be **separated from any decision-making** related to hiring, awards, or promotions. Demographic data should be passed to Human Resources or to a designated collator and kept separately from other materials. Do not collect this information if you cannot prevent its misuse.

Participate in surveys exploring LGBT+ experiences

Data collection is a vital component of diversity efforts. For any individual department or organization, it is necessary to evaluate the effects of existing policies and identify areas where improvement is required. For the larger academic community, an extensive, reliable data set allows constructive comparisons among departments and institutions, which may guide policy-making or even career decisions. The inclusion of LGBT+ demographic information and LGBT+ experiences in data collection is thus an essential element of formulating policies that are friendly to LGBT+ students, faculty and staff.

An important aspect of being a supportive chair is helping with the dissemination of research surveys. No data currently exists on the numbers of LGBT+ physicists and astronomers and their experiences within the academy. When you receive an email message asking you and your department members (students, faculty and/or staff) to participate in a survey, it is important that you distribute the email widely. This will help the greater community to collect the data necessary to understand what is actually happening and what issues need to be addressed.

Join an Out List as an LGBT+ scientist or as an ally

Finding a mentor who is knowledgeable about and can address the concerns of an LGBT+ student can be a difficult process. When the LGBT+ Physicists group was created in 2010, one of the major concerns raised by attendees and members was networking and finding other LGBT+ people in the field. Before these conversations began, most LGBT+ physicists had not met another LGBT+ person in the field during their career. Similarly, when LGBT+ astronomers began meeting informally at scientific conferences in 1992, their principal motivation was simply to develop a community.

Another way to raise visibility and provide targeted mentorship is to place one's name on a public Out List either as an LGBT+ scientist or as an ally. These lists allow students to find mentors and show leadership from allies. Some institutions already have such lists in place. There are also national lists, such as the LGBT+ Physicists Out List and the Outlist of LGBT Astronomers. Signatories to these lists have stated a commitment to working against bias and discrimination in the fields of physics and astronomy.

As a potential mentor and ally, familiarize yourself with societies and organizations that work on behalf of LGBT+ people, both on your campus and beyond, so that you may recommend them to students, staff and faculty members who ask. A list of these can be found in Appendix A.

IMPROVING DEPARTMENTAL CLIMATE TOMORROW

Increase LGBT+ visibility within the department

Visibility and awareness are important aspects of promoting a positive departmental climate for LGBT+ people. Visibility and awareness of LGBT+ policies and even department members fosters an atmosphere of inclusion. This is particularly useful for students and faculty who worry about disclosure of their identities within the department. Visibility and awareness set the department's tone to be one of acceptance, encouragement, and focus on intellectual growth, regardless of identity and biology. There are many easy ways to increase visibility and awareness within departments.

The most important step is distributing university anti-discrimination policies early, often, and widely. This can be done through postings in faculty lounges and in student common areas, as well as notes in graduate student and faculty offer letters, and other correspondence. In their course syllabi, instructors can include both information on academic integrity and links to the non-discrimination policies of the university. A visiting weekend for graduate students is a great time to have a representative talk about diversity issues within the department and the larger community while also addressing the department's commitment to inclusion. Faculty candidate interviews are an appropriate time to include handouts about inclusionary policies such as health care policies, same-sex partner hiring, and all-gender restroom options.

If your university does not have official inclusionary policies, the department can draft its own statement to explain its stance and approach to diversity and inclusion. This will help to attract the best candidates by showing a strong and supportive community.

Recognize and award significant achievements

Recognizing significant achievements of LGBT+ department members communicates that their contributions are valued equally along with those of others. Such recognition might include mention in a departmental newsletter or on a college or institutional website, nomination for a university or external prize, or an invitation to present a departmental colloquium.

The key point is that one needs to make sure LGBT+ department members are fairly considered for such recognitions, alongside all other department members. For example, one might ask the departmental salary review committee to suggest nominees for various recognitions after reading everyone's files each year. Another possibility is to seek nominees from among current or recent candidates for reappointment, promotion, or tenure; each tenure-system faculty member will therefore be considered several times during their career. In the case of an award aimed at graduate teaching assistants, the graduate chair might look over the teaching evaluations of all TAs or contact supervisors of all more experienced TAs to get suggestions.

When considering a faculty member's service portfolio, work towards improving diversity or making the department climate more inclusive – including for LGBT+ students, staff and faculty – should be counted in the same way as any other service to the professional community.

Include LGBT+ people in positions of power

As with other under-represented groups in physics and astronomy, LGBT+ scientists may encounter barriers to their academic or career advancement by virtue of exclusion from positions of power or opportunities for recognition - a phenomenon known as the "lavender ceiling". While an atmosphere of "tolerance" or friendliness may exist on an individual or interpersonal

level, full inclusivity can only occur when LGBT+ persons have **equal representation in structures** that provide access to power, resources, and recognition. Indeed, it has been documented that the experience or observation of exclusionary behavior within a department is significantly correlated with an LGBT+ faculty member's likelihood to leave their institution for an appointment elsewhere[1].

Thus, an important "best practice" closely related to visibility is the inclusion of openly LGBT+ members of a department in positions of authority and power. Such positions include department chair, assistant chair, or chairs of key committees that affect departmental governance (e.g., hiring, strategic planning, graduate admissions) as well as other ad hoc roles that could enable LGBT+ persons to have equal voices within the department.

Encourage faculty and staff to obtain diversity training

In seeking to develop an inclusive and supportive climate for LGBT+ members of one's department, it may be helpful to seek the assistance of a diversity training professional. This individual may provide specific sensitivity training for members of the department or offer other helpful resources. While members of one's department may have the best intentions regarding inclusivity, some may not be fully aware of unconscious assumptions or biases that, when inadvertently expressed, can contribute to an adverse or exclusionary climate. A diversity training session or workshop can help alert department members to such potentially unconscious biases and signals, provide a forum for educating department members about best practices, and offer an opportunity for discussion regarding LGBT+ inclusivity.

In some universities, there exists professional diversity training expertise on campus. Alternatively, a LGBT+ community center in the local community may provide contacts. These centers can be located through Center Link (see Appendix A). Webinars are also available through Campus Pride.

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[1]E. Patridge, R. Barthelemy, & S. Rankin. 2014. Factors Impacting the Academic Climate for LGBQ STEM Faculty. *Journal of Women and Minorities in Science and Engineering* 20: 75-98

Create safe spaces within the department

Navigating campus life poses at least some difficulties for most students, but is often even more fraught for those who also identify as members of sexual and gender minorities. Having a safe space for support and advice can make a big difference; just having such spaces available sends a powerful message of welcome and inclusion. On the other side, many well-meaning heterosexual, cisgender faculty and staff members are interested in assisting LGBT+ students and colleagues, but worry about saying or doing the wrong thing.

To address these concerns, many colleges and universities operate **Safe Zone** programs. These vary from institution to institution, but participants typically receive diversity training, a briefing on university resources available for LGBT+ students, and a sticker with which to prominently mark their offices as safe areas for people wishing to discuss LGBT+ issues. If a Safe Zone program is available on your campus, encourage faculty and staff – especially those with administrative responsibilities, such as the department chair and student liaisons – to undergo training and work to make their offices safe spaces.

Help department members find resources

As a chair, one of your primary roles is to help faculty and students in your department obtain local information and resources they need to be effective. This is especially important in supporting individuals belonging to populations (including LGBT+) that are traditionally under-represented in physics and astronomy. Research shows that these scientists are less likely to be part of the informal information-sharing networks through which those in the majority gain much of their information about how to survive and thrive in the profession[2].

Your mission, then, is to **learn what resources are available** on your campus and then to publicize them in a way that helps other faculty become part of the effort to be inclusive. As a starting point, consult the website of your local LGBT+ Resource Center (if one exists) or of the campus Diversity

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[2]e.g., U. Sandström, & M. Hällsten. 2008. Persistent nepotism in peer-review. *Scientometrics* 74 (2): 175-189.

Office. Arrange to meet with the director of the center or office to learn more about how your campus is working to support LGBT+ faculty and students and how your department can join these efforts. Then bring this information back into your department by inviting the director to make a brief presentation at a faculty meeting or meet with interested student groups such as oSTEM or WISE. Publicize campus resources that would be of use to your students and faculty by referring to them in a prominent section of the departmental website or graduate student handbook - one visible to prospective as well as current department members.

Appoint a diversity liaison or committee

It can be valuable for a department to appoint a faculty member, or a small committee of faculty members, as a climate/diversity liaison, to be a confidential advisor and listener for faculty and students who may be having inclusionary issues within the department. These liaisons could be listed alongside policy postings and in syllabi, and be introduced at student gatherings and welcome events. The liaison should receive training for the role, e.g. through the local LGBT+ Center or Women's Resource Center, to ensure that they know how to be effective, how to maintain confidentiality, and how to steer people to appropriate campus or community resources.

Such a diversity liaison needs to be seen as available and approachable for department members. They should initially introduce themselves to faculty and students and let people know how to contact them, and also renew these conversations over time so people remain mindful of their role. They should also send out regular communications (e.g., via e-mail or department newsletter) that emphasize the department's ongoing commitment to inclusion and share useful campus resources. Moreover, they should be proactive in seeking input on diversity issues from the faculty and students, and in communicating general trends or concerns to the chair to ensure that these issues receive timely attention. The diversity liaison should keep conversations confidential, except where the law or university policy require disclosure; when speaking with a student, staff member, or faculty member, the liaison should always make the limits of their confidentiality promise clear.

Increase networking opportunities

The importance of forming effective networks for minorities and women in physics and astronomy is well understood. Scientific networks provide access to mentoring, job opportunities, material and emotional resources to support people faced with a challenging circumstance, potential collaborators and also recognition and dissemination of work. They can also be catalysts for instituting beneficial changes in policy. These same benefits hold true for LGBT+ people. While many institutions have valuable assets such as a Gay-Straight Alliance or an LGBT center, these groups are rarely able to support an individual simultaneously as a sexual/gender minority and also as a scientist. Moreover, these organizations do not always cater to graduate students, postdocs and faculty. There's a need, therefore, for networks that explicitly address all aspects of identity at an appropriate level for a person's career stage.

Supportive heads of department should reach out to the Gay-Straight Alliance or LGBT Center, if these exist at their institutions, to identify resources and networks that may already exist, and should suggest to the leaders of those groups that it is necessary to make LGBT+ people feel welcome and supported explicitly in their scientific context. Make students and faculty aware of national networking organizations such as Out in Science, Technology, Engineering, and Mathematics (oSTEM) and the National Organization of Gay and Lesbian Scientists and Technical Professionals (NOGLSTP). Provide travel support for LGBT+ students to attend relevant networking meetings such as OUT for Work, NOGLSTP's OUT to Innovate conference, and oSTEM's national meeting, as is already common for networking conferences focused on scientists who are female, African-American, and/or Hispanic. Finally, if your school lacks an oSTEM chapter, encourage the formation of such a group.

By the way, groups like oSTEM can have a hard time raising money, because they are not affiliated with the campus LGBT center, and they have only one or two members from any particular department. Your department chair can help by giving them $500 and shaming the other STEM department chairs into doing likewise.

Actively recruit LGBT+ students

Departments should actively recruit LGBT+ students. Such efforts not only build a more diverse body of students within the department by including those who are traditionally under-represented, but also increase the number of undergraduate majors by inviting students who might not otherwise think of physics and astronomy as hospitable careers. How to begin? Send fliers to the LGBT+ center on campus, add a line to those flyers specifically welcoming LGBT+ students, and make departmental representatives visible at LGBT+ student events. Invite willing and out students, faculty and staff to take on mentoring roles in the department. Get in touch with (or become) the advisor of the campus oSTEM chapter. Send a representative to recruit students at conferences like Out to Innovate or the national oSTEM meeting. To broaden your department's reach, include information on inclusiveness and resources available to LGBT+ students in materials provided to prospective graduate students.

Allow name and gender changes on departmental records

Students, faculty members, and staff members sometimes change their names and/or genders from those originally given at enrollment or hiring, for reasons including gender transition and marriage. They may not pursue a legal change for various reasons, including (but not limited to) concerns about family disclosure. Ensuring that an up-to-date, preferred name[3] and gender are used for departmental records – including directories, awards, office nameplates, and letters of reference – is an especially vital practical concern for transgender department members, who may face discrimination in applications for employment or for further education. Establish a simple way for individuals to change their names and genders in departmental files, and stress to faculty members that they should confidentially check with the student to determine which name and pronoun to use in reference letters. Always check with an individual before changing a name on any record, especially those that are publicly accessible.

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[3]See this URL for an example of a preferred name policy.

Consider LGBT+ persons when developing family-friendly policies

More and more of us are juggling child and/or elder care with our professional responsibilities. In response, many employers are developing family-friendly policies to help employees balance their work and personal lives. When developing such policies, be mindful of non-traditional families. For example, explicitly include adoption in parental-leave policies, domestic partners in family-leave policies, and LGBT+ couples in dual-career accommodation practices. Parental leave policies for many institutions are listed on the AstroBetter web site (astrobetter.com).

Increase protections for postdocs

By its very nature, a postdoctoral fellowship is a vulnerable position. Postdocs typically work at the pleasure of their advisor and are paid out of his or her grant. Advisors may feel a tension between their obligation to advance the careers of their postdocs and their desire to compete a particular project before the money runs out. To improve the oversight and advancement of its postdocs, the Space Telescope Science Institute recently began a postdoctoral mentorship program, assigning to each postdoc a mentor who is *not* his or her advisor. The program has sponsored workshops on topics ranging from "How to Find a Job" to "How to Negotiate a Salary". Such mentoring programs can be replicated at your institution.

Postdocs may not receive the same job protections offered to other university employees. For example, while the Family and Medical Leave Act (FMLA) provides certain employees with up to 12 weeks of unpaid, job-protected leave per year, postdocs are often not considered employees and thus are not necessarily guaranteed FMLA protections. Paid medical leave would be extremely helpful for postdocs taking time off to recover from gender-alignment surgery or to care for a new child.

Keep people safe when traveling

Many research groups expect group members of the same (perceived) sex to bunk together at conferences to reduce travel expenses. What if one's perceived sex differs from one's gender identity? This is an even bigger issue when people are expected to be away from their home institution for a long time, as at a remote observing site or an accelerator. When the group rents an apartment, what rooming situation do they expect people to live in? How does the group deal with harassment complaints if there are two grad students on site for two months and no senior members of the group? A departmental policy regarding travel accommodations can prevent embarrassment, trauma – and possible litigation.

THREE

RECRUITMENT AND PERSONNEL ISSUES

Include non-discrimination statements in job announcements

Including a brief statement on the EEO policy of the employer in the job announcement serves several goals. It clarifies the legal situation that a potential employee enters, but it also serves to signal potential employees that the employer is aware of the issues facing LGBT+ people. If competing institutions lack protections or partner benefits for LGBT+ people, qualified LGBT+ applicants may be attracted to a non-discriminating institution they might otherwise have overlooked.

Employers can include a brief EEO statement stating that "this employer prohibits discrimination based on sexual orientation, gender identity, and gender expression." In individual job postings, employers can include language to point out that they "encourage applications from eligible candidates regardless of gender, race, national origin, age, religion, marital status, political views, sexual orientation, gender identity, gender expression, or disability."

Avoid assumptions

It is always embarrassing to use the wrong title, name, nickname or pronoun to address or refer to someone. When the individual in question is LGBT+, this type of mistake can be particularly hurtful.

To avoid such errors, beware of assigning pronouns to people you have not met. In conversations and deliberations, consider each applicant by name until as late as possible in the process. This precaution also helps reduce potential gender bias in the hiring process. When you make direct contact with an applicant for the first time (e.g., in a telephone or in-person interview), ask "How would you prefer to be addressed?" and then communicate this information to other department members involved in the hiring process. This simple question accommodates a wide range of situations, from gender expression to nicknames.

Be open to name changes for job and tenure applicants

Anyone who has changed names may encounter challenges when applying for employment, awards, or promotions. Employers are increasingly likely to require a background check as part of the application process; this entails providing all of the legal names one has held to the agency doing the background check. Evaluation committees typically require that one submit a list of publications as part of a job, award, or promotion application. It is conventional to provide the names of the authors so that the evaluators can note their relative seniority and/or ordering as part of assessing the candidate's relative contributions to the work. People change their names for many personal reasons, including witness protection, entering a life partnership (usually a change of last name) or undergoing a gender transition (usually a change of first name). Since these reasons are not generally relevant to job qualifications and tend to reveal information that the employee may prefer to keep private, employers should minimize the instances in which employees must reveal the history of their names.

Departments can take steps to balance employees' reasonable privacy concerns against the requirements of employment and evaluation processes. In the case of background checks, the department should already be ensuring that only those directly involved in performing the check see any information

that the individual submits. In the case of evaluations for awards or tenure, the department could explicitly establish a convention of including only the last (family) names of all authors on publication lists. This would still enable experts in the field to evaluate the author ordering and seniority of collaborators, while protecting transgender individuals from being forced to out themselves. Since this would still show where an individual has changed their family name, raising issues of gender bias, the department could issue a statement such as:

> *In publication lists for award or tenure applications, please list all authors' last names only and put your own last name(s) in bold type to make it easy for the readers to find.* **Name changes are not relevant to our decision and will not be considered in the evaluation**. *Please also include a brief statement at the start of the publication list that notes the author ordering convention in your sub-field (e.g., alphabetical, students first, primary author first, etc.).*

This establishes that the department will only consider professionally relevant information and offers a practical way for individuals to handle several name-related issues that frequently arise.

Finally, it should be noted that addressing naming issues in one's CV or publication list does not cover all eventualities. Evaluators who look up a journal article may still discover that someone has changed their name. Individuals may wish to contact their publishers to investigate the possibility of updating their name on past publications.

Provide help for all dual-career couples

For any dual-career partners, decisions about employment opportunities can be affected by uncertainty about the career prospects for the partner who is not the one primarily being recruited. In the case of same-sex dual-career partners, these problems can be amplified, especially in states or at institutions where the couple's relationship might not be recognized.

Discussing dual-career issues before an offer of employment has been made is challenging. The potential employer is legally barred from inquiring about the personal life of the job candidate. Additionally, the candidate may not

wish to raise these issues, lest they influence the likelihood of receiving an offer. Therefore, the department chair should make it standard practice to inform all job candidates or finalists about general university resources related to work-life balance; the chair should state clearly that this one-way flow of information (from chair to candidate) is standard practice. For instance, the chair might provide a copy of a university work-life resource guide, links to the local HERC[1] website, or the contact information of the university's point person for dual-career issues.

Note that even when a potential employee is comfortable discussing dual-career issues with potential employers (e.g., after a formal offer is in hand), a satisfactory solution may be impeded or precluded by legal barriers.

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[1]Higher Education Recruitment Consortium; hercjobs.org

CHAPTER
FOUR

ADVOCACY AT THE UNIVERSITY LEVEL

Become an advocate

If your institution's policies are not inclusive, lobby to change them. Advocate for inclusion of the words "sexual orientation" and "gender identity or expression" in your institution's non-discrimination policy. (See Appendix A for resources.) If you lose existing or prospective faculty, staff or students because of institutional policies that are unwelcoming to LGBT+ persons, notify your top administrators – especially if departing faculty members take grant money with them.

Use gender-neutral and inclusive language

Encourage your institution to include "sexual orientation" and "gender identity and gender expression" in its public statements about diversity and multiculturalism. Include LGBT+ issues and concerns in grievance procedures, housing guidelines, application materials, health-care forms, and alumni materials and publications. Include representations of LGBT+ people in these publications. Until a university-wide policy is in place, your department can take an active role in improving the language that is used at your institution by pointing out instances of discrimination through language and work with

other departments (including human resources, benefits, and public relations) to adopt gender-neutral and inclusive wording.

Provide restroom accessibility

For many people, especially transgender, intersex or gender-nonconforming people, the availability of restroom space is a frequent and stressful concern. It is important to be able to use the restroom in peace, without being harassed or interrogated about whether it's the "right" one. To mitigate this worry, express a clear policy that students, faculty and staff may use any restrooms appropriate to their gender identities, and designate some restrooms as all-gender. Usually, all-gender restrooms are single-stall; new ones may be added in a building renovation or existing ones may be re-labeled with an inclusive sign. These restrooms provide critical infrastructure for people with disabilities, family needs, and people with privacy or medical concerns.

Some universities, such as American University and Kent State University, now require newly built and significantly renovated structures to include at least one all-gender restroom each. These restrooms have signs that only read "Restroom" and/or contain both male and female symbols. Elsewhere, individual departments may keep this concern in mind when contemplating changes to the department's space.

Identify your LGBT+ students

In 2013, the *New York Times* reported that a small but growing number of colleges is including questions about sexual orientation and gender identity in their undergraduate applications. The principal goal is to make prospective LGBT+ students feel welcome, but the information allows schools to consider these students for scholarships aimed at increasing diversity on campus, to provide them with information about support services for LGBT+ students, and to track their success relative to their non-LGBT+ peers. Protecting students' privacy is key, so some schools do not transfer this information to the student's permanent file. Still, you cannot know how well you are serving your LGBT+ students until you know who they are.

Help trans students deal with Selective Service

People who were assigned male at birth are required to register with the Selective Service System within thirty days of their eighteenth birthday. This includes persons who transitioned before or since then. People who were assigned female at birth are not required to register regardless of their current gender or transition status. These requirements are important for all college students, because many government benefits, including federal financial aid and federal employment, are contingent upon Selective Service registration, but they can be particularly daunting for trans students. The National Center for Transgender Equality has prepared a helpful document[1] for trans people dealing with the Selective Service System. Universities should be aware that trans students may struggle to provide proof of registration.

Provide inclusive health insurance

LGBT+ students, faculty and staff are often unable to take full advantage of university or college health benefits. Although the Human Rights Campaign reports that 62% of Fortune 500 companies now extend coverage to domestic partners of their employees[2], many colleges and universities do not. In states where health coverage for domestic partners is permitted, advocate with the administration to include domestic partners, regardless of gender, as possible insurance beneficiaries. If state law prohibits such an arrangement, it may be possible to pursue an alternative insurance structure subsidized by sympathetic donors.

Many health plans exclude "procedures related to being transgender". As documented by the Transgender Law Center, this exclusion not only applies to medical services that are vital for the transitioning process – such as hormone treatments, transition surgery, or therapy for those who require it – but also has been used to deny treatment for pathologies associated with the sex assigned at birth (e.g., uterine cancer in a transgender man) and for such non-gendered problems as the flu or a broken arm. The impact of such policies

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[1]The Selective Service: How the Selective Service Impacts Transgender People
[2]hrc.org/resources/entry/lgbt-equality-at-the-fortune-500

on an individual's physical and mental health cannot be overstated. Advocate for removing the transgender exclusion from your college or university's health plan, as has been done successfully by the University of California System. As a smaller step, advocate for including specific coverage for certain procedures (such as therapy, hormone treatments, and sexual reassignment surgery) for transgender students, faculty, staff and family members.

Offering inclusive health insurance is a competitive advantage in hiring candidates who are LGBT+ or who have LGBT+ beneficiaries.

Provide other benefits fairly

Offer other benefits equally to both opposite-sex and same-sex spouses/partners of employees. These benefits may include access to the gym, the library, and the university credit union. If child care is provided on campus, make it easy for both parents to take their child home.

Appoint a contact person for dual-career couples

For any potential employee, it may be important to be able to acquire information about dual-career resources in confidence and without affecting the search. As noted earlier, the issues can be even more complex for same-sex dual career couples. The university should provide means for job candidates to acquire this information as early as possible in the process, to ensure that there is clarity about the prospects when an offer of employment is made. Having a visible, comprehensive web page where resources related to dual-career issues and work-life balance are collected is helpful. Best of all is for the university to appoint a **single contact person for all dual-career issues, regardless of gender**. This person (e.g., a vice-provost for academic human resources), who is far removed from the search committee, can assist in assessing the situation while the hiring process is on-going. Having a well-informed person from whom potential employees may obtain advice about the details of a dual-career situation can help make all job candidates feel welcome.

Participate in surveys exploring LGBT+ experiences

Encourage participation in **national or regional surveys** that address LGBT+ issues. For example, Campus Pride produces the LGBT-Friendly Campus Climate Index, a valuable resource for students and administrators. An official authorized to represent the college or university on LGBT+ issues may contact Campus Pride to take part in the assessments for the Index.

RESOURCES

LGBT+ Physicists   lgbtphysicists.org
This website was created to collect resources for and address the issues of
LGBT+ people in physics. It contains information on joining LGBT+ Physicists, an Out List, current and past events, and links to other resources.

WGLE   wgle.aas.org
The Working Group on LGBTIQ Equality (WGLE, pronounced "wiggly") of
the American Astronomical Society (AAS) is tasked with promoting equality
for lesbian, gay, bisexual, transgender, intersex, and questioning (LGBTIQ)
individuals within the astronomical community.

Campus Climate Index   campusprideindex.org
This index was put together by CampusPride and ranks colleges and universities by how friendly they are to LGBT+ students. It contains information
on how ranking is done, as well as how you can add your institution to the
list.

CampusPride   campuspride.org
CampusPride is a leading organization in research on LGBT+ people in colleges and universities. They put together the 2010 State of Higher Education
for LGBT People, organize LGBT+ job fairs, and compile lists of those colleges and universities that excel in LGBT+ issues.

CenterLink   lgbtcenters.org

CenterLink, the Community of LGBT Centers, is a member-based coalition of local LGBT community centers. It represents over 200 centers in the U.S. and abroad.

Gay, Lesbian, and Straight Education Network   glsen.org
Although geared for education from K-12, GLSEN's research provides many insights into LGBT+ students including those soon to become college freshmen. Every year, GLSEN puts together a National School Climate Survey. In 2011, GLSEN found that 81.9% of LGBT+ middle and high school students experienced harassment in the previous year. Theyve also done studies specifically on transgender students, such as their Harsh Realities report, and on LGBT+ people of color, such as their Shared Differences report. All of their publications can be found at http://www.glsen.org/cgi-bin/iowa/all/research/index.html with both an executive summary and a full report.

GLAAD Media Reference Guide   glaad.org/reference
Although created for journalists, this guide provides information on terminology used with LGBT+ communities as well as a list of current national issues in the United States faced by the community.

Human Rights Campaign   hrc.org/resources
The HRC website provides extensive resources on a variety of topics. Of particular relevance are articles on advocating for LGBT equality in the workplace and domestic-partner benefits.

Imigration Equality   immigrationequality.org
This is a nonprofit advocacy group focused on U.S. immigration issues as applied to members of the LGBT+ community. Their website provides up-to-date resources for issues frequently faced by transgender immigrants, binational same-sex couples, other LGB+ individuals, and people who are HIV-positive. They are also sometimes able to provide legal help or recommend a private attorney.

The National Center for Transgender Equality   transequality.org
A social-justice organization dedicated to advancing the equality of transgender people through advocacy, collaboration and empowerment. Their

web site provides information on a variety of issues that affect trans people.

NOGLSTP   noglstp.org
The National Organization of Gay and Lesbian Scientists and Technical Professionals, Inc., is a national professional society. It educates STEM communities about the needs of their LGBT+ members and supports lesbian, gay, bisexual, transgender, and queer people in STEM fields, especially via mentoring, networking, and advocacy.

oSTEM   ostem.org
Out in Science, Technology, Engineering, and Mathematics is a national society dedicated to the organization and professional development of LGBT students in STEM. The group consists of affiliate chapters throughout the U.S.

Out for Work   outforwork.org
Out for Work is a national educational non-profit that hosts career fairs for LGBT+ undergraduate students.

Out to Innovate   noglstp.net/outtoinnovate
Sponsored by NOGLSTP, Out to Innovate is a two-day career summit for LGBTQI students, faculty and professionals in science, technology, engineering, and mathematics, held every other year.

Outlist of LGBT Astronomers   web.physics.ucsb.edu/∼blaes/lgbtastro
The Outlist of LGBT Astronomers gives names and contact information for both LGBT astronomers and allies.

Post-DOMA Fact Sheet
                              aclu.org/lgbt-rights/after-doma-what-it-means-you
The American Civil Liberties Union has joined with several other organizations to compile a very useful set of fact sheets, describing the legal situation of married same-sex couples after the US Supreme Court struck down the so-called "Defense of Marriage Act" (DOMA). This decision requires the US federal government to recognize legal same-sex marriages, but does not require individual states to do so, resulting in a confusing patchwork of protections and obligations that depend on the state where your institution is located and the state where the couple was married. The fact sheets are

an educational resource for same-sex couples, students whose parents have a same-sex marriage, human resources departments, and other administrators, covering employment benefits, taxes, immigration, federal student aid, and more.

The TONI Project   transstudents.org
Organized by the National Center for Transgender Equality (NCTE), the TONI Project is a student-oriented space for sharing college and university practices and policies of particular interest to trans students. Campus-by-campus information may be useful to prospective students choosing a school, or to people hoping to improve policies at their own institutions.

The Transgender Law and
Policy Institute   transgenderlaw.org
This institute is a non-profit organization dedicated to engaging in effective advocacy for transgender people in society. The TLPI brings experts and advocates together to work on law and policy initiatives designed to advance transgender equality. Of particular interest to colleges and universities, this institute has put together a list of policies that affect transgender students and the institutions which implemented them
(http://www.transgenderlaw.org/college/index.htm).

The Trevor Project   thetrevorproject.org
The Trevor Project is the leading national organization providing crisis intervention and suicide prevention services to LGBT+ young people ages 13-24. Their 24/7 confidential lifeline number is 1-866-488-7386. They also provide training for adults who work with LGBT+ youth.

WISE
Women in Science and Engineering is active on many college campuses.

AUTHORS

This guide was prepared by subcommittees of the LGBT+ Physicists organization and WGLE, the Working Group on LGBTIQ Equality of the American Astronomical Society. The authors include physicists and astronomers from several points on the LGBT+ spectrum, as well as allies. We are listed here in alphabetical order:

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