



TITLE IX COMPLIANCE REVIEW REPORT



UNIVERSITY OF ARIZONA

PHYSICS DEPARTMENT

*Office of Diversity and Equal Opportunity
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I. INTRODUCTION

NASA conducted a limited scope compliance review of the University of Arizona (“UA” or “the University”) Physics Department (including the Theoretical Astrophysics Program, a non-academic interdisciplinary program which includes students from the Physics, Astronomy, and Planetary Sciences programs), to ensure that beneficiaries of NASA grants have equal opportunity, without regard to sex, to pursue, participate in and benefit from academic, extracurricular, research, occupational training and other educational activities. The review was conducted under Title IX of the Education Amendments of 1972, and NASA’s implementing regulations and policy,¹ which prohibit discrimination on the basis of sex in educational programs and activities receiving Federal financial assistance.²

A. Background

NASA conducted this compliance review pursuant to its Title IX regulations, which provide for periodic reviews of NASA grant recipients.³ The Agency has been involved in many Title IX related compliance activities since the regulations were issued in August 2000. For example, NASA conducted a limited scope “desk-audit” review of 183 grant recipients between 2003 and 2006, to evaluate compliance with Title IX procedural requirements.⁴ NASA’s Title IX compliance program received further impetus with the July 2004 recommendation of the Government Accountability Office (GAO) that Federal agencies conduct onsite compliance reviews.⁵ In addition, the NASA Authorization Act of 2005 requires NASA to conduct at least two Title IX compliance reviews annually.⁶

B. Objectives and Scope

NASA sought to achieve the following key objectives in conducting this review:

Objective 1

To evaluate UA’s compliance with NASA Title IX regulations regarding the Title IX Coordinator’s function and responsibilities; the existence of a Title IX policy and the quality of its dissemination; Title IX grievance procedures and the effectiveness of their implementation; Title IX self-evaluation efforts, specifically regarding the UA Physics Department; recruitment and outreach practices; admission, enrollment, and retention; academic advising/career counseling;

¹ NASA Policy Directive 2081.1A, *Subject: Nondiscrimination in Federally Assisted and Federally Conducted Programs of NASA - Delegation of Authority*.

² Title IX of the Education Amendments, as amended (20 U.S.C. §§ 1681-1688); Nondiscrimination on the Basis of Sex in Education Programs or Activities Receiving Federal Financial Assistance, 14 C.F.R. Part 1253.

³ See 65 Fed. Reg. 52,859 (Aug. 30, 2000). Enforcement Procedures, 14 C.F.R. § 1253.605 (incorporating compliance requirements of Title VI of the Civil Rights Act of 1964 (42 U.S.C. § 2000d)).

⁴ Designation of responsible employee and adoption of grievance procedures, 14 C.F.R. § 1253.135(a).

⁵ Government Accountability Office, *Gender Issues: Women’s Participation in the Sciences Has Increased, but Agencies Need to Do More to Ensure Compliance with Title IX* (July 2004) (July 2004 GAO Report). Included in the Report’s recommendations was that “the Administrator of NASA continue to implement its compliance review program to ensure that compliance reviews of grantees are periodically conducted.” (p. 28).

⁶ See 42 U.S.C. § 16798(b).

research participation and classroom experiences; policies/procedures and Physics student experiences relating to parental/marital status (“family friendly” policies); and safety.⁷

Objective 2

To identify promising practices of the UA Physics Department designed to promote gender equity and increase the number of women participating in its Physics program, consistent with the recommendations and focus of the July 2004 GAO Report, and to determine the extent to which promising practices are actually helping to increase the number of women participating in the UA Physics program.

C. Methodology

1. Compliance Review Plan

NASA developed a Title IX compliance review plan (CRP) to identify potential issues, relevant regulatory requirements, and the specific inquiries needed to conduct a thorough compliance assessment. This CRP was developed in consultation with the U.S. Department of Justice (DOJ), Civil Rights Division, and the U.S. Department of Education (ED) Office for Civil Rights, and was informed in part by a Title IX literature review. The CRP identified two focal points for compliance assessment: procedural compliance requirements and program administration. The CRP also identified the methods by which needed information would be gathered from recipients for each of the substantive areas, including: information requests for statistical data and relevant policies and procedures, and an on-site visit to UA to interview university officials, Physics Department faculty, and physics students.

2. Literature Review

In an effort to understand emerging concerns, NASA conducted a review of literature regarding women in science and engineering (S&E) programs, including Title IX policy and enforcement in the S&E context.⁸ To be aware of experiences of women in the physics context, NASA relied

⁷ The compliance review was limited in scope to the UA Physics Department, including both the undergraduate and graduate programs. Furthermore, the compliance review did not cover Subpart E, Discrimination on the Basis of Sex in Employment in Education Programs or Activities Prohibited, contained in NASA’s Title IX regulations at 14 C.F.R. Part 1253.

⁸ See generally, Mildred S. Dresselhaus, Judy R. Franz, Bunny S. Clark, “Improving the Climate for Women in Physics: A Program of Site Visits Funded by the National Science Foundation” (American Physical Society and the American Association of Physics Teachers: 1995) (Program Summary of the American Physical Society Committee on the Status of Women Site Visit Program, accessible at <http://www.aps.org/programs/women/sitevisits/summary.cfm>) (APS Program Summary); National Academy of Sciences, National Research Council, *To Recruit and Advance: Women’s Students and Faculty in Science and Engineering* (2006); Government Accountability Office, *Gender Issues: Women’s Participation in the Sciences Has Increased, but Agencies Need to Do More to Ensure Compliance with Title IX* (July 2004); Catherine Pieronek, *Title IX and Gender Equity in Science, Technology, Engineering and Mathematics Education: No Longer an Overlooked Application of the Law*, 31 J.C. & U.L 295 (2005); Ellen Sekreta, *Sexual Harassment, Misconduct, and the Atmosphere of the Laboratory: The Legal and Professional Challenges Faced by Women Physical Science Researchers at Educational Institutions*, 13 Duke J. Gender L. & Pol’y 115 (Spring 2006); National Academy of Sciences, National Academy of Engineering and Institute of Medicine, *Beyond Bias and Barriers: Fulfilling the Potential of Women in Academic Science and Engineering* (2006).

primarily on the summary report of the American Physical Society (APS) Committee on the Status of Women Site Visit Program. The report, "Improving the Climate for Women in Physics," provides valuable information gathered by APS about women's experiences in physics programs, based on site visits to over 40 university physics departments across the country since 1990.⁹

a. APS Report

APS conducted a site visit of the UA Physics Department in fall 2004. This site visit did not form the basis for the NASA compliance review. However, the information provided in the compliance report regarding the APS's overall site visit program is intended to provide context regarding the issues relating to gender equity in physics programs.

One of the basic objectives of the APS site visit program is to identify a set of generic problems commonly experienced by women in the physics departments reviewed.¹⁰ For each site visit, APS reviews quantitative and qualitative information to assess the climate for women at the host facility. APS reports that the climate for women varies dramatically among the departments.¹¹

Further, APS reports that at many universities visited, women described "repeated indignities," such as pictures of nude women on faculty office walls; posters and computer printouts with pictures of women in lewd positions in teaching assistants' communal offices; women students being asked to substitute for secretaries during their breaks; thesis advisors who call their female students "honey" or the equivalent; and a prevalent assumption that all rewards obtained by women are "only because you are a woman."

APS found that "although none of these indignities is earth-shattering, the long term effects of being subjected to such things repeatedly takes much of the enjoyment out of the graduate experience of many female physics students and helps explain why only the very committed and the very tough remain in physics."¹²

Based on its Site Visit Program, APS reported that important ingredients for a positive climate can include: at least several active, mainstream female faculty; a group of female students who interact regularly with each other; a supportive department chair who listens and responds to concerns of students; and efforts to create a safer physical environment.¹³

b. American Institute of Physics (AIP) Surveys

A 1993 "climate" survey of physics programs, conducted by the American Institute of Physics (AIP), showed that only 27 percent of women graduate student respondents in the U.S. believe that their department encourages self-confidence.¹⁴ In its 2001 survey report *Women Physicists*

⁹ APS Program Summary.

¹⁰ Ibid.

¹¹ Ibid.

¹² Ibid.

¹³ Ibid.

¹⁴ See Jean M. Curtain, Geneva Blake, and Christine Cassagnau, American Institute of Physics, "The Climate for Women Graduate Students in Physics," *Journal of Women and Minorities in Science and Engineering*, vol. 3, pp. 95-117 (1997); see also APS Program Summary

Speak, AIP observed that: “[w]omen . . . face barriers in the form of strongly held beliefs that [they] are incapable of doing good science”¹⁵ and that “[c]onfidence in one’s ability can be especially important for female students when they confront the negative effects of sexism, which can cause women to question their ability or their right to pursue advanced degrees.”¹⁶ And, in its 2006 report, *Women Physicists Speak Again*, the AIP continues to identify climate as one of the top reasons women physicists give for being discouraged about physics.¹⁷

3. *On-site Compliance Review Activities*

NASA conducted an on-site review of the UA Physics Department on October 29 – November 1, 2007. During its visit, NASA staff met with the UA Title IX coordinator and conducted interviews with nine members of the Physics Department faculty (seven men and two women), including the Physics Department Head, the Directors of Physics Graduate Studies and Undergraduate Studies, the head of the Theoretical Astrophysics Program (TAP), and the Lead Co-Principal Investigator of the NSF ADVANCE grant. NASA interviewed three members of the Astronomy Department faculty based on their involvement with the Theoretical Astrophysics Program.

NASA also conducted one-on-one interviews with nine graduate students (five women and four men), and five undergraduate students (two men and three women). Additionally, NASA met with representatives of two student groups, the Physics Graduate and Undergraduate Student Councils (five students on the Graduate Student Council, all male, and six students on the Undergraduate Student Council, five male and one female).

II. COMPLIANCE REVIEW ANALYSIS

The compliance review analysis provides an assessment of issues within the two focus areas of procedural compliance requirements and program administration. A draft compliance report was prepared and submitted to UA on May 16, 2008. UA has informed the Agency that it has taken steps to address a number of the concerns and recommendations provided in the draft report.¹⁸ The remaining recommendations are intended to strengthen existing compliance activities. Promising practices associated with each of the compliance areas are also reported.

¹⁵ American Institute of Physics Statistical Research Center, *Women in Physics Speak: The 2001 International Survey of Women in Physics*, 2001, p. 19. Accessible at: <http://www.aip.org/statistics/trends/reports/iupap.pdf>.

¹⁶ *Ibid*, p. 7.

¹⁷ American Institute of Physics Statistical Research Center, *Women Physicists Speak Again*, April 2006, pp. 10-12. Accessible at: <http://www.aip.org/statistics/trends/reports/iupap05.pdf>.

¹⁸ See Letter from Jeanne M. Kleespie, Assistant Vice President for Equal Opportunity and Affirmative Action, to Sharon Wagner, Assistant Director, Program Planning and Evaluation Division, NASA Office of Diversity and Equal Opportunity, June 16, 2008 (Kleespie Letter).

A. Designation of Responsible Official for Title IX Coordination and Enforcement

1. Regulatory Requirements

The NASA Title IX regulations state that a recipient must designate an official responsible for Title IX coordination and enforcement, a “Title IX Coordinator.”¹⁹ The recipient must notify all students and employees of the Title IX Coordinator’s name, office address, and telephone number.

2. Discussion

In addition to the regulations, Federal agencies evaluating recipient compliance with this provision consult the U.S. Department of Justice (DOJ) document, “Questions and Answers Regarding Title IX Procedural Requirements” (Title IX Q&A), for additional considerations in the designation and effective functioning of a Title IX Coordinator.²⁰ For example, the Title IX Q&A states that effective implementation of the Title IX coordinator’s responsibilities includes providing ongoing training, consultation, technical and information services regarding Title IX requirements, grievance issues and compliance programs; and having access to information and authority necessary to enforce compliance requirements.

UA has designated the Assistant Vice President for Equal Opportunity and Affirmative Action as the Title IX Coordinator. The Title IX Coordinator heads the Equal Opportunity and Affirmative Action Office (EOAAO). The current Title IX Coordinator has served in this position since 2001. NASA reviewed the roles and responsibilities of the Title IX Coordinator identified in DOJ’s Title IX Q&A, with a specific focus on the functions and responsibilities especially administration and implementation of UA’s Title IX grievance process, the provision of training to UA faculty and staff, and the authority and access to university senior leadership needed to effectively perform roles and responsibilities.

The Title IX Coordinator had ready knowledge of details pertaining to complaint processing, e.g., determining jurisdiction, as well as the approximate number of grievances filed per year and the number currently in the system. The Title IX Coordinator stated that UA processes between 25-30 investigations annually, but there had been fewer grievances filed in 2007 (approximately 15). Most of the complaints do not involve students. According to the Title IX Coordinator, somewhere between 25 to 50 percent of complaint investigations annually involve students raising claims against faculty.

In addition, NASA examined the training efforts that the Title IX Coordinator undertakes on a regular basis, since training is a critical part of the tasks and responsibilities of a Title IX Coordinator.²¹ For example, the Title IX Coordinator stated that she conducts approximately 50 percent of the training provided by the EOAAO. This includes search committee training for faculty positions, in which committees are encouraged to advertise as broadly as possible,

¹⁹ Designation of responsible employee and adoption of grievance procedures, 14 C.F.R. § 1253.135(a).

²⁰ This document is accessible at <http://www.usdoj.gov/crt/cor/coord/TitleIXQandA.htm>.

²¹ See Title IX Q&A, “Designation of Title IX Coordinator – What factors should a recipient consider in designating a Title IX Coordinator?”

consistent with EO policy and practice. The Title IX Coordinator's office also provides a training session for physics undergraduate students every year and graduate students at least every other year, upon request of the Physics Department.

3. *Compliance Assessment*

Based on interviews with the Title IX Coordinator and actions taken thus far, the Title IX Coordinator possesses the skills and competencies necessary for the effective administration of the grievance process and related activities, such as an in-depth knowledge of the Title IX regulation, a thorough knowledge of UA's Title IX grievance procedures and processes, including the filing and investigative stages, and knowledge of UA personnel policies and practices. The Title IX Coordinator effectively performs her duties regarding the implementation and administration of the grievance process. Moreover, the UA Title IX Coordinator is performing her coordination role efficiently. Finally, under the leadership of the Title IX Coordinator, the UA EOAAO is engaging in a number of promising practices pertaining to ensuring gender equity in STEM and other Equal Opportunity (EO) issues (see "Promising Practices," below).

However, NASA notes that the physics students interviewed during the on-site did not know the name or office of the Title IX Coordinator. This has been the case with other Title IX reviews, and is to be expected on a large campus. Nonetheless, it is important that UA take action to better disseminate the name and contact information of the Title IX coordinator, since the provision of such information is a regulatory requirement.²²

In addition, NASA is concerned that the Physics Department is not partnering effectively with the Title IX Coordinator to provide its faculty and graduate research assistants consistently with anti-harassment and other forms of training relating to gender equity. UA informs NASA that it is taking steps to ensure that the faculty and graduate research assistants are consistently provided with such training in the future.²³ There will also be an annual announcement regarding the training going out to all faculty, staff and students. EOAAO will continue to supplement the required (on-line) training with live training as requested by departments. NASA's expectation is that these steps will help alleviate such concerns in the future.

4. *Recommendations:*

a. UA should ensure that Title IX information is part of the orientation briefings provided to all students, including teaching assistants and other student employees when they arrive at the University and/or begin their work. This information should include the name, contact information, and roles and responsibilities of the Title IX Coordinator. It should be provided in printed or electronic format, or both. The training should also provide detailed information on what to do and where to go if a student experiences or observes discrimination or harassment based on gender or other protected bases. As noted above, UA has informed NASA that such

²² 14 C.F.R. § 1253.135(a).

²³ Kleespie Letter, p.1 states "[i]n the fall 2008 semester, the University of Arizona will notify all faculty, staff, and students of mandatory on-line training provided by New Media Learning. This training will cover sexual harassment and discriminatory harassment based on other protected categories."

information will be available to all students as part of a new training plan to be deployed in Fall 2008 (see n. 22).

- b. UA should consider creating a webpage dedicated to Title IX with a comprehensive explanation of Title IX requirements, such as internal grievance procedures and external forums for filing grievances. In addition, the information should identify and provide contact information for the Title IX Coordinator and her office. A link to this page should be e-mailed to students on an annual basis, in addition to the NASA brochure on grant-related civil rights requirements including Title IX. See “Promising Practices,” below. UA has informed NASA that it will create such a webpage, link to it from newly required training, and provide a link to the NASA brochure.
- c. UA should schedule briefings for the various departments, particularly in STEM fields, on a regular basis to highlight Title IX requirements. The Physics Department should invite the Title IX Coordinator to provide live training, for example, at its departmental orientation sessions for new students. This would provide additional opportunities to better inform students of the Title IX Coordinator’s role and where to go to report gender-related issues should they arise.
- d. The Title IX Coordinator’s office should participate in survey activity regarding gender issues for students on campus and in the various departments. For example, the Title IX Coordinator could conduct a campus-wide survey on climate issues, including gender, on a department-by-department basis. Such a survey could build on the work UA has already done through its Millennium Project, which was initiated to “enhance the development of an institutional culture that fosters productivity, creativity, and academic excellence. The Project supports the University of Arizona’s goal of achieving an enabling academic climate that will allow all faculty, staff, and students to be productive and unhindered by any impediments due to considerations of gender or race/ethnicity.”²⁴

5. *Promising Practices*

- a. The Title IX Coordinator has formed collaborative partnerships with UA administrative leadership that encompass active participation on faculty search committees, the ADVANCE grant program, the ADVANCE Stewardship Committee, and the Commission on the Status of Women.
- b. The Title IX Coordinator works to ensure that training participants view Title IX as integral to their area or program within UA. To this end, training emphasizes proactive efforts to ensure Title IX compliance, and focuses on inclusion and the creation of a respectful environment.
- c. UA offers a training orientation to all new graduate teaching assistants that covers roles and responsibilities associated with Title IX compliance.

²⁴ See description of the Millennium Project at: <http://www.u.arizona.edu/~millen/desc.htm>.

B. Adoption of Title IX Grievance Procedures/Policy Dissemination

1. Regulatory Requirements

The NASA Title IX regulations require that recipient educational institutions adopt and publish grievance procedures providing for prompt and equitable resolution of student and employee complaints alleging any action that would be prohibited by Title IX.²⁵ The regulations do not specify a structure or format for the grievance procedures. However, ED and DOJ have issued Title IX guidance addressing the requirements for internal grievance procedures.²⁶ For example, this guidance has emphasized the need for recipient institutions to have “well-publicized and effective grievance procedures in place to handle complaints of sex discrimination, including sexual harassment complaints.”²⁷

NASA’s Title IX regulations require grant recipients to take specific and continuing steps to notify students, employees, applicants for admission and employment, and unions or professional organizations having collective bargaining or professional agreements with the recipient, that it does not discriminate based on gender in the educational programs or activities that it operates, and that it is required by Title IX not to discriminate in such a manner.²⁸

DOJ regulations make federal funding agencies and recipient institutions responsible for disseminating information materials, e.g., handbooks, manuals, pamphlets, to ensure program beneficiaries are aware of their rights pursuant to EO law.²⁹ ED states in guidance that “[a] grievance procedure . . . cannot be prompt or equitable unless students know it exists, how it works, and how to file a complaint.”³⁰ ED also states regarding sexual harassment that “without a disseminated policy and procedure, a student does not know either of the school’s policy against and obligation to address this form of discrimination, or how to report harassment so that it can be remedied.”³¹

2. Discussion

a. UA Title IX Grievance Procedures

The DOJ Title IX Q&A also provides guidance on some of the basic components of effective grievance procedures. For example, recipient grievance procedures should inform the grievant of the right to file a discrimination complaint with an appropriate Federal agency, either

²⁵ Designation of responsible employee and adoption of grievance procedures, 14 C.F.R. § 1253.135(b).

²⁶ See, e.g., U.S. Department of Justice Civil Rights Division, *Title IX Legal Manual* (Jan. 11, 2001), § V.E., p. 111 (accessible at <http://www.usdoj.gov/crt/cor/coord/ixlegal.htm>); U.S. Department of Education, Office for Civil Rights, “Revised Sexual Harassment Guidance: Harassment of Students by School Employees, Other Students, or Third Parties,” (Jan. 19, 2001) (accessible at <http://www.ed.gov/about/offices/list/ocr/docs/shguide.html>.) (OCR Revised Sexual Harassment Guidance).

²⁷ See, OCR Revised Sexual Harassment Guidance, Preamble, “Enduring Principles from the 1997 Guidance.”

²⁸ Dissemination of policy, 14 C.F.R. § 1253.140.

²⁹ Public dissemination of Title VI information, 28 C.F.R. § 42.405(c).

³⁰ OCR, Revised Sexual Harassment Guidance, § IX. Prompt and Equitable Grievance Procedures.

³¹ OCR, Revised Sexual Harassment Guidance, § V(D), “The Role of Grievance Procedures.”

simultaneously with the filing of an internal grievance or after the unsatisfactory resolution of a grievance.

UA's Title IX grievance procedures are embodied in the "Procedures for Investigating Complaints and Conducting Administrative Reviews" (Investigative Procedures), implemented by the EOAAO.³² In addition, UA has Student Employee Grievance Procedures.³³ Both sets of procedures are readily accessible on-line. The Investigative Procedures were updated in August 2006.

NASA notes that the Investigative Procedures are clearly and logically written. The clarity and straightforward nature of the Procedures is consistent with ED guidance calling for accessible and effective procedures.³⁴ The process encourages the identification of names of witnesses, scheduling of interviews, review of documents, development of a conclusion regarding what seems to have happened, and a comparison of the allegations with school policies to see if there was a violation. The process also provides for the issuance of a finding. The administrator, e.g., Dean, Department Head, is kept apprised to ensure against retaliation. The respondent (i.e., the person against whom a complaint is filed) and complainant both have appeal rights. The University generally attempts to resolve concerns without the need for the filing of a complaint.

It is also noteworthy that the Investigative Procedures make provision for the EOAAO to conduct "Administrative Reviews." A "Type 1" Administrative Review is an investigation conducted at the request of an Administrator who has concerns that discriminatory actions may be occurring within his/her unit."³⁵

One concern NASA has with the Investigative Procedures is that while they acknowledge that a student may file a complaint with an external agency at any time within that agency's deadlines, the procedures do not identify any external agency by name.³⁶ A revision to the procedures, or a separate document is needed to explain who the agencies are, e.g., the Department of Education Office for Civil Rights. At a minimum, complainants should be provided with this information when they come to EOAAO (see "Recommendations," below). In addition, it would also be helpful to complainants to understand that external agency deadlines may differ from those of UA's internal procedures.

In addition, it appears that on occasion, issues and allegations have not been brought to the attention of the Department Head, and consequently, were not reported to the EOAAO and the Title IX Coordinator. For example, the Graduate Physics Student Council reported that it has in the past received allegations that were not reported to the Department Head, and as a result, not to the Title IX Coordinator. This is problematic because, among other things, it does not allow the Title IX Coordinator to be of assistance in the process or to have knowledge of discrimination or harassment issues with which departments may be dealing. One way of addressing this issue may be for UA to establish an informal mechanism for resolving complaints to be used if the parties

³² Accessible at: <http://w3fp.arizona.edu/affirm/Invprocp.htm>.

³³ Accessible at: <http://dos.web.arizona.edu/uapolicies/ouap5.html>.

³⁴ Ibid, Section D, "The Role of Grievance Procedures."

³⁵ "Investigative Procedures," Sec. V(A).

³⁶ It should be noted that the UA "Sexual Harassment Policy," (discussed below), issued in 2000, includes the names of external agencies, but it does not mention that these external agency processes may have different filing deadlines from UA's internal procedures.

agree to do so.³⁷ Alternatively, UA may wish to utilize its Ombuds process for informal Title IX complaint resolution.

b. Title IX Policy/Dissemination

The University currently has an Interim Nondiscrimination and Anti-Harassment Policy (Interim Policy). The policy has been “Interim” since May 2005. The interim policy is available on-line. In addition, information materials such as brochures containing the general non-discrimination and anti-harassment policies are provided to students at various student events, training and workshops, and upon request of the EOAAO. However, UA needs to finalize and re-issue the Interim Nondiscrimination and Anti-harassment Policy. In addition, UA has a “Sexual Harassment Policy,” which was issued in December 2000. This document, unlike the Investigative Procedures and the Interim Policy, does mention appropriate state and federal agencies for filing complaints externally. UA informs NASA that it is in the process of developing a more comprehensive policy that combines its current Sexual Harassment Policy with a significantly revised version of its Interim Non-discrimination Policy.³⁸

UA also provided NASA a copy of an 11 by 17 inch poster entitled, “Equal Employment Opportunity: It’s the Law,” which covers legal requirements pertaining to employment discrimination. The poster was disseminated under a cover letter from the Title IX Coordinator stating that federal regulations require that the university post such notifications where employees can see them. NASA notes, however, that the poster does not cover requirements pertaining to equal educational opportunity covered under Title IX and other applicable civil rights laws. The benefit of physical posting (in addition to web posting) is that minimal affirmative effort is required on the part of program beneficiaries to view a poster on a wall. In addition, this can help to familiarize the UA community with the applicable law in order to facilitate further research as needed, e.g., web searches.

Overall, it appears the UA nondiscrimination and anti-harassment policy documents are appropriately disseminated. However, regarding its communications/informational materials, e.g., posters, UA should provide information on requirements pertaining to equal educational opportunity covered under Title IX and other applicable civil rights laws on its web site (see “Recommendations,” below).

³⁷ The DOJ Title IX Q&A, in its discussion on Title IX Grievance Procedures, references an OCR document entitled “Title IX Grievance Procedures: An Introductory Manual” (available by request at: <http://www.ed.gov/offices/OCR/publications.html>). This document, which provides some of the basic components of effective grievance procedures, envisions an informal complaint process stating “[b]asic to most formal grievance procedures is the provision that grievances shall move from an initial level (often informal) involving only the grievant, the person immediately responsible, and a designated grievance decision maker.” (p. 17).

³⁸ Kleespie Letter, p. 4. NASA cautions UA that ED, while not requiring educational institutions to have a sexual harassment policy separate from their nondiscrimination policies, states that schools’ “nondiscrimination policy and grievance procedures for handling discrimination complaints must provide effective means for preventing and responding to sexual harassment. Thus, if, because of the lack of a policy or procedure specifically addressing sexual harassment, students are unaware of what kind of conduct constitutes sexual harassment or that such conduct is prohibited sex discrimination, a school’s general policy and procedures relating to sex discrimination complaints will not be considered effective.” OCR, Revised Sexual Harassment Guidance, Sec. V(D), “The Role of Grievance Procedures.”

2. *Recommendations*

a. Grievance Procedures:

(i) UA should clarify within the grievance procedures (or a separate document disseminated to all Department Heads) that Department Heads, upon hearing of allegations of discrimination or harassment, should immediately confer with the EOAAO, so that the Title IX Coordinator may keep abreast of issues and trends pertaining to discrimination or harassment allegations emerging in the Department. UA may wish to establish a mechanism within its grievance procedures, or use its Ombuds process to better ensure timely and effective informal processing of complaints.

(ii) UA should revise its Investigative Procedures and Interim Policy (or provide in a separate document) to include the names and contact information for external agencies with which a complainant may file a complaint, e.g., the Department of Education Office for Civil Rights, or NASA. At a minimum, complainants should be provided with this information when they come to EOAAO. In addition to identifying the applicable external agencies, UA should provide operational links to their web sites. There should also be a statement included on the EOAAO web site that notifies students, faculty and staff that if they elect to file with these agencies, that it is the individual's responsibility to identify and comply with the applicable filing deadlines--which may differ from those used by UA.

(iii) The Student Employee Grievance Procedures currently state that, "Grievances involving illegal actions and perceived racial or other discrimination or sexual harassment should be reported directly to the Affirmative Action Office." The term "other discrimination" should be removed and replaced with the specific bases for discrimination, e.g., sex, national origin, to which the term refers, and indicate that this definition includes harassment.

b. Policy/Dissemination:

(i) UA should finalize its "Interim Policy on Non-discrimination and Harassment," which has been pending approval for nearly three years. UA may wish to consider consolidating its Sexual Harassment Policy with its Nondiscrimination/ Anti-harassment Policy.

(ii) UA should develop and disseminate a poster on "Equal Educational Opportunity" under Title IX and related laws, and post it in high traffic areas, including common rooms in dormitories and the Student Union, similar to its "Equal Employment Opportunity: It's the Law" poster. UA may wish to use as a template NASA's poster "Equal Opportunity: It's the Law/Know Your Rights and Responsibilities." An electronic copy of the poster has been provided to the UA EOAAO.

(iii) The Title IX Coordinator should disseminate an electronic version of the NASA brochure, "Nondiscrimination and Equal Opportunity in NASA Assisted Programs: Title VI of the Civil Rights Act of 1964 and Related Laws," (which includes information on Title IX) by posting on the EOAAO website and by forwarding the document to current students in the Physics Department working on NASA-funded research. NASA notes that UA has agreed to create a link to the NASA information on the EOAAO website.

3. *Promising Practices*

- a. The Title IX Coordinator has posted on the EOAAO website a statement of “Compliance Contacts,” including information on available internal and external processes.
- b. UA’s Title IX grievance procedures include a provision for the office of the Title IX Coordinator to conduct “Administrative Reviews.” A “Type 1” Administrative Review is an investigation conducted at the request of an Administrator who has concerns that discriminatory actions may be occurring within his/her unit. In the intervening period since NASA conducted its Title IX review, the College of the Dean of Science has requested an Administrative Review of the Physics Department to be conducted by the UA EOAAO.³⁹

C. Title IX Self-Evaluation

1. *Regulatory Requirements*

The NASA Title IX regulations required recipient institutions to conduct a Title IX self-evaluation by September 29, 2001 and to keep the self-evaluation on file for three years.⁴⁰ While UA is not obligated to conduct a further Title IX self-evaluation, such evaluations are very helpful to ensure, for example, that selection criteria or academic practices are not having an adverse impact based on gender. They also provide an opportunity to evaluate trends over time and to develop mechanisms for addressing emerging issues.

2. *Compliance Assessment*

The UA response to NASA’s information requests under the instant review constitutes a thorough Title IX self-evaluation of the Physics Department regarding two key components: admissions and treatment of students.

3. *Recommendations*

- a. NASA recommends that the Physics Department continue to examine and evaluate admissions, enrollment, retention rates, graduation rates, and other statistical data on a regular basis as required under NASA’s regulations.⁴¹ This type of ongoing analysis will enable the Department to stay informed on emerging trends and react appropriately.
- b. NASA further recommends that the Physics Department assess the results of various university climate surveys, particularly the Physics Graduate Student Council Survey (described in the following Promising Practices section), as part of its self-evaluation. Responses to these questions could assist the Department in identifying gender issues that affect the overall environment and individual student experiences.

³⁹ See Kleespie Letter, p. 4.

⁴⁰ Self-evaluation, 14 C.F.R. § 1253.110(c).

⁴¹ This is required under the NASA regulations at 12 C.F.R. § 1253.605. Note that the requirements to collect such data are codified in NASA’s Title VI regulations at 14 C.F.R. § 1250.105(b).

3. *Promising Practice*

NASA commends the UA Physics Department Graduate Student Council for developing a student survey that included gender equity issues in the Physics Program. For example, the survey asked questions such as whether graduate students, based on first-hand experience or discussions with other students, believe there is “any problem with sexual harassment in the department,” and whether or not they believe there “is a real and significant bias against women in the department (even if it does not strictly fall under the definition of sexual harassment)?” The survey was disseminated to graduate students during the fall 2007 semester. Survey results will be discussed under Section E.1.c., *Overall Academic Environment* (see page 23).

D. Recruitment, Admissions, Enrollment, Retention and Completions

1. *Regulatory Requirements*

The NASA Title IX regulations state that recipients may not discriminate on the basis of sex in admissions and recruitment.⁴² Consistent with this requirement, NASA examined the UA Physics Department for male and female participation rates (undergraduate and graduate level) in the areas of recruitment, outreach, admissions, acceptances, enrollments, graduate fellowships, teaching assistantships, research assistantships, and research opportunities at the undergraduate level.

2. *Discussion*

a. Undergraduate Students

The Physics Department does not specifically recruit undergraduate students. Rather, the Department works in conjunction with the College of Science to attract students to its Program. There are currently no special admission requirements for students into the College or into Physics. When students apply to UA and meet the University admission standards, they are admitted.

Undergraduate students interviewed by NASA reported that they did not believe the admissions process to be biased on the basis of gender. The majority of undergraduate students stated that their interest in the program was self-generated and that they had not participated in any UA sponsored outreach programs while in middle school or high school.

Table D.1, below, provides five years of total undergraduate enrollment data (declared majors). Female enrollment has gradually declined since academic year (AY) 02-03, both in terms of whole numbers and as a percent of total undergraduate physics enrollment. The low female enrollment in AY 06-07 is of most concern, especially since male enrollment does not follow a similar pattern. Both the Department Head and the Director of Undergraduate Studies were asked about the decline in the enrollment of women, and the AY 06-07 numbers in particular. They had no explanation for the data.

⁴² Admission, 14 C.F.R. §1225.300; Recruitment § 1253.310.

Table D.1. Undergraduate Physics Majors, Enrollments by Academic Year

	02-03	03-04	04-05	05-06	06-07
F	54	52	47	48	32
M	108	110	121	115	116
	162	162	168	163	148
F%	33.3%	32.1%	28.0%	29.4%	21.6%

Table D.2, below, yields some insight into the low enrollments for AY 06-07 noted above. The data show that although female undergraduates were admitted into the Physics Program at a higher rate than males (as a percent of their applications), female entry rates were much lower. Only 37 percent of admitted females enrolled, whereas 54 percent of admitted males enrolled. Again, Department officials could not explain the low entry rate for accepted females, except to speculate that UA loses top-notch students to higher ranked physics departments. The problem with this explanation is that one would assume that UA loses both top-notch male and female students to higher ranked physics departments. The question remains as to why enrollment rates are lower, as a percentage of those admitted, for females than males.

Table D.2. Application, Admitted, and Enrollment Rates of Undergraduate Physics Majors in AY 06-07

AY 06-07	number of applications	number admitted	admitted/ applied	number enrolled	% enrolled of admitted	% enrolled of applied
F	21	19	90%	7	37%	33%
M	72	61	85%	33	54%	46%
Total	93	80	86%	40	50%	43%

Another part of the explanation for the decline of declared female physics majors in AY 06-07 may be the attrition rate of female physics majors (including those who left the University and those who changed majors). Table D.3, below, provides the attrition rates among undergraduate physics majors for five academic years. Female attrition rate was fairly stable in terms of both numbers and percent of total attrition until AY 05-06, when the number of females leaving the Department almost doubled from the previous year. NASA notes that male attrition also increased in AY 05-06, but came nowhere close to doubling the prior year's number.

Table D.3. Attrition Rate of Undergraduate Physics Majors

		F	M	TOTAL
02-03	Enrolled	54	108	162
	Left	13	33	46
03-04	Enrolled	52	110	162
	Left	13	27	40
04-05	Enrolled	47	121	168
	Left	10	35	45
05-06	Enrolled	48	115	163
	Left	19	42	61
06-07	Enrolled	32	116	148
	Left	NA	NA	0

The Department explained to NASA that it is committed to improving undergraduate retention and has recently instituted a number of changes to help with retention. Changes include: revamping undergraduate advising, implementation of a peer mentoring system, reconstitution of the undergraduate student council, and commitments to improve the undergraduate student lounge. While these changes are commendable, it remains to be seen whether they will be sufficient to improve retention, particularly of female undergraduates. NASA is concerned that there may be environmental and climate factors at play (other than the state of the student lounge) that impact female students more strongly than male students. These factors will be discussed later in this Report under Section E, Academic Environment (see page 21).

In terms of undergraduate completion rates, NASA compared UA with the national average cited by the American Institute of Physics in its 2007 Report on enrollments and degrees. Over the five year period reviewed by NASA, 25 percent of UA undergraduate physics degrees were awarded to females. This compares favorably to the national average of 21 percent cited by the AIP for the class of 2005.⁴³ However, while UA’s past success at graduating female undergraduates is commendable, it does not eliminate NASA’s concern with the possible downward trend of female enrollment noted above. The lower enrollment of females during FY 06-07 may not be reflected in lower graduation rates until future years.

b. Graduate Students

Table D.4, below, provides five years of graduate application data, by gender. The data indicate that females have averaged 37 applications to the Graduate Physics Program per year since AY 02-03, for an average of 21 percent of the total applications. Female applications were down in AY 04-05, but rebounded the following year.

Table D.4. Graduate Application Rates by Academic Year

	02-03	03-04	04-05	05-06	06-07
F	33	37	32	46	39
M	131	124	161	140	134
	164	161	193	186	173
F%	20%	23%	17%	25%	23%

During the same time period, females have consistently comprised about 19 percent of those accepted into the UA Graduate Physics Program each year, as shown in Table D.5 below, despite an overall trend of lower acceptance numbers of both male and female applicants.

However, as shown in Table D.6, below, the ratio of females accepted to females that applied trends downward each year from AY 02-03 through AY 05-06. In AY 02-03, 39 percent of females who applied were accepted, compared to only 15 percent in AY 05-06. The percentage of females accepted rebounds in AY 06-07, but is still lower than the ratio of males accepted vs. males applied.

⁴³ American Institute of Physics Statistical Research Center, *Enrollments and Degrees Report, 2005*, August 2007, p. 18. Accessible at: <http://www.aip.org/statistics/trends/reports/ed.pdf>.

Table D.5. Graduate Acceptance Rates by Academic Year

	02-03	03-04	04-05	05-06	06-07
F	13	11	8	7	9
M	50	47	36	29	38
	63	58	44	36	47
F%	21%	19%	18%	19%	19%

Table D.6. Percent of Female and Male Students Accepted of Those Who Applied

	02-03	03-04	04-05	05-06	06-07
F	39%	30%	25%	15%	23%
M	38%	38%	22%	21%	28%

The Physics Department provided background information regarding the data in Tables D.4, D.5, and D.6, explaining that starting in 2005 the Department completely revised its admissions standards, establishing much more rigorous guidelines. These changes were due to the Department’s belief that its high attrition rate was due to admitting students who were not prepared to succeed at the graduate level. The Department believes the changes in admissions standards is having a positive effect, in terms of enrolling higher quality students, but states it will take time to see the effects reflected in positive program statistics (e.g., lower attrition, higher graduation rates).⁴⁴

Students interviewed by NASA concurred that they might not have been admitted under the more rigorous standards used today by the Physics Department (although it should be noted that the students who made this observation were succeeding in the program).

The data in the above tables are consistent with the Department’s intention of raising standards, and lowering acceptance rates. Acceptance rates were lower for both males and females in AY 04-05 and AY 05-06 (see Table D.6). NASA notes with concern, however, that the downward trend in acceptance rates has impacted female applicants more noticeably than male applicants. The low female acceptance rate warrants further evaluation and monitoring by the Department, in order to: 1) ensure unbiased use of its more stringent acceptance standards, and/or 2) implement proactive measures to improve recruitment of better prepared female graduate applicants.

Furthermore, the lower acceptance rate of female applicants is exacerbated by a matriculation rate that is lower for females than males. As shown in Table D.7, below, female matriculation rates (students who enrolled after being accepted) were lower for females than males in four of the five years reviewed. The matriculation rate for females was alarmingly low in AY 05-06, when only one female entered the graduate physics program (of 46 who applied and 7 who were accepted).

Table D.7. Matriculation Rates of Accepted Students

	02-03	03-04	04-05	05-06	06-07
F	31%	18%	25%	14%	33%
M	16%	28%	36%	41%	39%

⁴⁴ UA written response to NASA’s information request, page 14.

The Physics Department needs to explore why accepted female students are matriculating into the graduate Program at lower rates than males to ensure it is not the result of unintentional bias and to develop strategies for improving female matriculation rates.

NASA examined funding provided to graduate students in the form of fellowships, research assistantships, and teaching assistantships, and found the funding equitable on the basis of gender. Students interviewed did not report any concerns regarding unfair funding of students. However, NASA is troubled by the unilateral decision-making given to individual professors with regards to research grant money. NASA was told that, “research assistantships are the province of each individual professor, and are funded through research grant money. Therefore each individual faculty member is responsible for selecting and funding the students in her/her research group and the Department as a whole plays no role in this process.”⁴⁵

The hands-off philosophy on the part of the Physics Department is different from other departments reviewed by NASA. Other departments utilize Graduate Committees to review graduate applications and reach consensus on student funding. The unilateral decision-making utilized by the UA Physics Department is inherently more susceptible to the unintentional gender bias of individual professors, since there is no oversight or checks and balances taking place. Unintentional bias can be very subtle and can occur even with well-meaning people. If the Physics Department chooses to continue with this type of process for providing research assistantships, principal investigators should receive regular training on recognizing and preventing subtle gender bias.

NASA compared UA completion rates for doctorate degrees with the national average cited by the AIP. The UA Physics Program awarded 13 percent of its doctorate degrees to females during the five year period reviewed, compared to a national average of 14 percent of physics doctorate degrees earned by females in 2005.⁴⁶ NASA remains concerned about the low acceptance rate of female applicants into the UA graduate program in recent years. Female completion rates, as a percent of total degrees awarded, are likely to fall in coming years if this trend continues.

3. *Compliance Assessment*

The UA Physics Department is in compliance with Title IX regulations in terms of its recruitment, admissions, enrollment and financial assistance. However, although five years of statistical data is insufficient to draw hard conclusions, NASA is concerned with some of the general trends observed in the data and with specific “bad” years for females that may or may not be anomalies. The past five years of data certainly suggest that ongoing monitoring of admissions, enrollment and attrition data is warranted.

⁴⁵ Ibid., p. 13.

⁴⁶ AIP, *Enrollments and Degrees Report*, p. 18.

4. *Recommendations*

a. Undergraduates

(i) The Physics Department should follow-up with admitted students who do not enroll to identify the reasons and develop strategies to increase enrollment, based on results.

(ii) The Physics Department should monitor and evaluate reasons for attrition, e.g., exit surveys of students who leave the program, broken out by gender, and make systemic changes as warranted.

b. Graduates

(i) The Physics Department and Graduate Admissions Committee need to systematically monitor and evaluate admissions to ensure there is no subtle, unintentional gender bias in the process.

(ii) The Department should consider alternative recruitment events and activities, that may have wider appeal to females, e.g., have current female graduate students host female recruits.

(iii) The Department should follow-up with accepted students who do not enroll to identify the reasons and develop strategies to increase enrollment, based on results.

(iv) The Department should require all principal investigators to take gender bias awareness training on a recurring basis (every three years at minimum).

5. *Promising Practices*

a. The reconstitution of the undergraduate and graduate student councils within the Physics Department is a well-thought out activity, consistent with Title IX. This is an innovation NASA had not seen in reviews at other universities. The student councils are an excellent means of enhancing communications between students and the Department and for students to raise issues and concerns. It is critical, however, that the Department promptly and appropriately address concerns raised by the councils, if they are to be effective and fulfill their potential.

b. The Department's efforts to expand its recruitment sources, increase the quality of its entering students, and other efforts to increase overall retention of students are consistent with the spirit of NASA's Title IX regulations. However, the Department must closely monitor the results of the efforts implemented in 2005, in order to assess what is working or not working, and to react accordingly.

E. Academic Environment: Advising, Career Counseling, Research Participation and Classroom Experiences

1. Regulatory Requirements

The NASA Title IX regulations provide that a recipient shall not, on the basis of sex, exclude from participation in, deny the benefits of, or otherwise limit any person in any advantage or opportunity pertaining to academic, extracurricular, research, occupational training, or other education program or activity operated by the recipient.⁴⁷ The Title IX regulations explicitly state that a recipient may not discriminate on the basis of gender with regard to career counseling or guidance.⁴⁸

In addition, the Title IX regulations incorporate by reference the NASA Title VI regulatory provision prohibiting a recipient from utilizing methods of administration which have the effect of defeating or substantially impairing accomplishment of the objectives of the program for an individual based on sex.⁴⁹ On the basis of these provisions, NASA examined the overall academic environment in the Physics Department, including academic advising, career counseling, research participation and classroom experiences.

2. Discussion

a. Academic Advising and Career Counseling

NASA's interviews with several graduate physics students raised concerns regarding graduate advising. NASA heard from several graduate students, both male and female, that female students experiencing academic difficulty received different feedback from a particular faculty member than male students having similar difficulty. NASA heard that the female students were not offered the same encouragement for continuing in the Program as the male students. In fact, according to several students NASA interviewed, the female students were advised that standards had to be lowered for them to be in the Program in the first place, and that they should consider dropping out. No male graduate student interviewed informed NASA that they received this kind of negative feedback at any time in their graduate studies at UA, including male students who had taken the same course with the same professor and acknowledged having difficulty in the class.

Of concern is an incident described to NASA by a female graduate student who said she was advised that it was unclear whether she would be able to continue in the Program because of a low score on her qualifying exam and that a decision as to whether she had actually passed had not yet been made. This student was a research assistant working with the sole tenured female faculty member in the Department. NASA was informed by both faculty and students about the tensions existing between the tenured female faculty member and several male faculty members, including the faculty member who advised this student that the decision as to whether she had passed had not been made. Another female graduate student familiar with this incident, who received an even lower (but still passing score) but who was not associated with the tenured female faculty member,

⁴⁷ Education programs or activities, 14 C.F.R. § 400(a), (b)(7).

⁴⁸ Counseling and use of appraisal and counseling materials, 14 C.F.R. § 1253.425.

⁴⁹ Enforcement procedures, 14 C.F.R. § 605.

was told that she had passed. In addition, NASA heard from a male student that when he received a similarly low score on this exam he was encouraged to “hang in there” and go forward – a very different experience from what some of the women students reported.⁵⁰ The possibility of differential treatment in advising based on gender raises serious concerns and UA must take steps to ensure that the Physics Department is in compliance with Title IX in this regard.

In addition, a number of graduate students reported that there is no written information on key program requirements including, but not limited to, the comprehensive exams for the master’s degree. For example, NASA heard from the Physics Graduate Student Council that “documentation surrounding [the comprehensive exam] is poor . . . and more transparency on the topics that are covered and how it is graded is needed.”

Several students reported that inconsistent information is being provided to different students, in terms of the program requirements, course prerequisites, etc. Furthermore, students reported that the advising is ineffective because essentially it is all done by one individual, which often results in untimely advising. These concerns, expressed by both male and female graduate students, are particularly troublesome since the Department cited improvements in advising as one of a number of reforms it implemented in 2005 to improve retention of students.

At a minimum, it appears there has been little transparency regarding the Program requirements, e.g., the qualifying examinations. Without clear, published guidelines widely disseminated and readily available to all graduate students in the program, the Physics Department leaves itself open to at least the appearance of unequal treatment given the responses provided during the interviews (see “Recommendations,” below).

b. Research Participation/Classroom Experiences

NASA examined whether students were treated differently or otherwise limited, on the basis of gender, with regard to research participation and in their classroom experiences, including whether there was any indication of sexual harassment by faculty or graduate students in positions of responsibility.

Overall, both graduate and undergraduate Physics students interviewed reported that they observed no differences based on gender in the way professors interacted with students in the classroom or laboratory setting. There was one exception to this. One female graduate student reported that a professor, in responding to a correct answer provided by a female student stated: “[g]entlemen take note, not only is she beautiful, she knows the right answer.”

Some Physics students (of both sexes) observed that, in the classroom setting, female students sometimes tend to be “more reserved” when it comes to class participation while the male students

⁵⁰ In its response to NASA’s draft compliance report, UA states that: “[t]he University indicated in its interviews that the advice provided to these female graduate students was *related to the fact that they were poorly prepared for their graduate studies and were admitted when they probably should not have been.*” (see Kleespie Letter, p. 5) This is consistent with the statements of some female graduate students NASA interviewed regarding how they were advised. NASA notes that neither UA in its response, nor poorly-performing male student interviewees reported males being discouraged in this manner.

tend to be more “talkative” and “outspoken.” Interestingly, students in the Physics program who had also taken classes in Astronomy (or in one case a student who had switched from Physics to Astronomy), noted that by comparison, female students in Astronomy classes were as outspoken as, and participated equally with, the male students. These students stated that while they had observed a difference in regard to women’s participation between the two programs, it was unclear to them why this was the case. However, several students observed that it may have to do with the greater numbers of women in Astronomy as opposed to Physics.

One male graduate student stated that in his estimation there are differences in teaching styles between male and female faculty members. He views women professors as being more patient and more concerned that students “get” the material, whereas men seem to want to “get on with it.” Other male students interviewed expressed the belief that while there is generally equal access to programs, counseling and other benefits, they have noticed that the faculty makes additional efforts regarding female students’ participation. One male graduate student stated he believes this is because many of the female students are Asian, and it is his opinion that, “Asian women are less aggressive and tend to be shy,” and the professors are trying to address both a gender and cultural gap by calling more on women in class. The student’s statement, reflecting a stereotypical notion, was suggestive of the need for awareness-raising around issues of gender, race and culture.

c. Overall Academic Environment

Regarding the overall learning environment, the American Physical Society conducted a site visit program at the UA Physics Department in 2004, as part of an on-going program spearheaded by the APS Committee on the Status of Women (see Section I(C)(2), above). During its onsite visit, NASA heard about the APS site visit and report from a number of faculty and students. Based on NASA’s interviews with faculty and students, an informal committee was formed in response to the APS report’s recommendations. However, except for the inclusion of female faculty on more Departmental committees, the Department has been largely unsuccessful in implementing the APS recommendations. It appears that over time, the informal committee stopped meeting.⁵¹

Based on some of the anecdotal information received during the review, NASA has concerns regarding the overall academic environment within the Department. This concern is limited to the graduate Physics program, and NASA notes that the climate for undergraduates does not seem to be a cause for concern.

For example, one female graduate student stated that based on her experiences in the Program, she believes there is a “subtle gender bias” in the Physics Department that manifests itself in “different ways,” for example male students telling crude jokes in the lab and in student clubs, such as the Students for the Exploration of Space Club. She related that in most instances, when asked to stop the behavior, the male students complied. She stated however that this behavior was of such concern that she raised it with her advisor at one point but that “it did not do any good in the long run.” This student stated that she thinks “there should be more information on where to go to voice concerns regarding harassing behavior.”

⁵¹ NASA concurs with the recommendation made by APS to address climate concerns within the Department (see “Recommendations” for this section).

Several female graduate students stated they believed their program participation was negatively impacted by either inappropriate remarks and conduct and/or retaliation based on association with the one tenured female faculty member in the Physics Department, who stated that she has been subjected to inappropriate remarks and conduct. A former graduate student stated that when she became involved in gender equity issues, such as trying to organize a Women in Physics group, and began working with the tenured female faculty member on these issues, several male professors told the student that this female faculty member had “certain problems and issues,” that she was “crazy,” and “you don’t want to get involved with her,” basically telling the student that it was not in her best interest to associate herself with this professor. The student said that as a young graduate student being confronted with these remarks, she felt very “uncomfortable” and that she felt that these kinds of remarks being made about a professor by other faculty members seemed “inappropriate.”

More troubling is that this was the same female professor whose female graduate students experienced difficulties in the program, e.g., being discouraged from continuing in the program (see “Academic Advising and Career Counseling,” above).

Additionally, NASA heard from several female graduate students that they had been subjected to inappropriate remarks by faculty members. These students stated variously that “it was no big deal,” “nothing I couldn’t handle,” and that it had not in any way limited their participation in the program. Nonetheless, the fact that these students were subjected to such remarks is of concern.

The most specific information NASA heard regarding inappropriate remarks was from a female graduate student who stated that a male professor had on one occasion commented on the “unusual” tan line across her chest. This same professor introduced her at a graduate school function as “one of our most beautiful graduate students.” The female graduate student stated that she avoided this professor’s courses as much as possible.

Another female undergraduate student stated that although in general she has not noticed any gender-related “negative dynamics” between professors or male students with female students, she has noticed that if she is not careful about what she wears to class, it is obvious that the older male professors will look at her in an “eyes wandering” kind of way.

The conduct described suggests an overall lack of awareness and understanding that may be remedied by counseling and/or more frequent and effective sexual harassment training for faculty.

The anecdotal information NASA received during interviews was supported by data received from the Physics Graduate Student Council. As described earlier, the Graduate Student Council conducted a survey during fall semester, 2007. The Council shared results of the survey with NASA in March 2008, reporting that 30 of 76 graduate students returned the survey. “Thirty-eight percent of those surveyed and 50 percent of the women surveyed believe that there is a culture which tolerates sexism in the department and 44 percent of all and 50 percent of women believe that there is inappropriate behavior that is a serious problem worthy of attention.”⁵²

⁵² UA Physics Department Graduate Student Survey, fall semester 2007, responses to questions 13a and 13b.

One serious allegation of inappropriate conduct NASA heard about concerned a faculty meeting in which a male faculty member allegedly said to the one tenured female faculty member in the Physics Department “maybe you should take off your clothes so that we can make sure you’re really a woman.” While NASA’s focus in this review was on the students, such conduct, if it did in fact occur (and NASA notes that the allegation remains unconfirmed), could have a negative impact on the climate within the department. Therefore, the University must take steps to, first, investigate this allegation, and second, to ensure that such conduct, if it occurred, does not recur. As noted above, the Dean of the College of Science has requested that an Administrative Review of the Physics Department be conducted by the OEOAA, and NASA has been advised that this review is underway.

UA informs NASA that the review will include an investigation of this allegation, which is certainly the most extreme example of an allegation of inappropriate conduct heard during the onsite review. While this was an allegation made by only one faculty member, another faculty member interviewed alluded to having been in a meeting where a “serious” incident of inappropriate conduct occurred. Moreover, there were several allegations of inappropriate conduct made during the review, involving more than one faculty member. NASA’s concern is that these allegations, if true, may indicate the presence of a larger problem. A related concern is that such behavior, if it occurs among the male faculty members, may be modeled by students, or that it may intimidate female students in the Program.

It should also be noted that a former student and several current female graduate students stated that one reason they believed the environment in the Department was not as welcoming toward women as it could be was the very small number of women professors and, in their view, the marginalization of the only tenured female professor in the Department. These students noted the lack of female role models, and indicated that these factors had limited or negatively impacted their Program participation, including discouragement from continuing in the Program.

Overall, NASA has concerns regarding the possible presence of inappropriate conduct relating to gender occurring within the Physics Department. Notwithstanding these issues, NASA notes that many of the students interviewed, especially male and female undergraduates, generally believe that the academic environment is not tilted toward males or females. Male students in particular, both undergraduate and graduate, stated they believe that the Department is equally welcoming to both men and women and affords equal opportunities to programs, advising, and other benefits.

However, even male students said that they could understand why the Physics Department might not be perceived as “women friendly,” as one student put it. This student stated that he heard “rumblings” concerning inappropriate comments directed toward women faculty and students.

2. *Recommendations:*

a. UA should ensure that all members of the Physics faculty and Physics graduate students who are Teaching or Research Assistants receive annual training on gender bias and harassment. The curricula for these trainings should be carefully vetted by the Title IX Coordinator and other stakeholders such as the Lead Co-Principal Investigator of the NSF ADVANCE grant to ensure that the training will be effective in helping to prevent inappropriate conduct. The training should

include detailed information on UA's policy and procedures for addressing allegations of harassing conduct, so that faculty and graduate students who are receive such allegations know the process for handling them effectively. As NASA has noted above, UA plans to deploy required training on non-discrimination and anti-harassment beginning in fall semester of 2008.

b. The UA Physics Department, in partnership with the Title IX Coordinator and other stakeholders, should revisit the recommendations of the APS Site Visit report, to ensure that all appropriate recommendations are implemented.

c. The UA Physics Department should utilize surveys such as the Physics Graduate Student Council Survey that include specific questions regarding gender to gain a clear and more accurate picture of student perceptions regarding gender issues, including harassment. To the extent these surveys indicate the presence of inappropriate conduct, further efforts to address such conduct should be taken. In addition to training, these efforts might include: continued dissemination of information regarding proper channels for reporting allegations of inappropriate conduct, changing applicable practices or procedures, and increasing oversight activities, as appropriate for the situation.

d. The UA Physics Department led by the Head should work in partnership with the Lead Co-Principal Investigator of the NSF ADVANCE grant to discuss ways of increasing the number of qualified women faculty in the Department, and to increase efforts to provide female role models by inviting more women physicists to speak at presentations and colloquia. To the extent permitted by the ADVANCE grant, this partnership could also include the Physics Department obtaining an ADVANCE research grant to focus on issues pertaining to graduate students and climate.

3. *Promising Practice*

The ADVANCE Program Director held an orientation for the UA Physics Department faculty search committee on how unconscious gender bias can play a role when recruiting new faculty. The orientation focused on ways in which subtle bias may present itself in the search process, such as differences in the way recommendations are written for male versus female candidates, e.g., women applicants' recommendations focused more on administrative work abilities while male applicants' recommendations focused on hard-core research. Part of what makes this a promising practice in NASA's estimation is that the Department Head at that time was very receptive to partnering with ADVANCE to provide this education and awareness opportunity to faculty.

F. Policies/Student Experiences Relating to Parental/Marital Status (“Family Friendly”) and Physical Safety

1. *Regulatory Requirements*

The NASA Title IX regulations include a detailed provision on matters pertaining to marital and parental status.⁵³ Generally, under the regulations, a recipient may not apply any rule concerning a student's actual or potential parental, family, or marital status that treats students differently on the

⁵³ Marital or parental status, 14 C.F.R. § 1253.530.

basis of sex. Regarding pregnancy and related conditions, the regulations state that a recipient may not discriminate against any student, on the basis of the student's pregnancy, childbirth, false pregnancy, termination of pregnancy, or recovery, unless the student requests voluntarily to participate in a separate portion of the program or activity of the recipient.

In addition, the NASA Title IX regulations provide that a recipient shall not, on the basis of sex, limit any person in any advantage or opportunity pertaining to academic, extracurricular, research, occupational training, or other education program or activity operated by the recipient.⁵⁴ The Title IX regulations incorporate by reference the NASA Title VI regulatory provision prohibiting a recipient from utilizing methods of administration which have the effect of defeating or substantially impairing accomplishment of the objectives of the program for an individual based on sex.⁵⁵

In light of these provisions, NASA examined UA policies and student experiences in the Physics Department regarding parental/marital status and safety issues.

2. *Discussion*

a. Parental/Marital Status

NASA's interviews with faculty, graduate and undergraduate students indicate that UA and the Physics department are generally supportive of family-friendly concerns, and have been responsive to the challenges presented by marriage and parenting. The University allows use of sick and annual leave for pregnancy. One Physics faculty member who gave birth during the school term stated that the Department Head was supportive and said "take a month off" and her peers assisted with classes and adjusted schedules to help her. A male graduate student reported that the Department allowed him to adjust his schedule to assist with parenting responsibilities.

Interviewees, including faculty and students, generally did not know whether day care programs were available on campus and did not know details regarding child care subsidies. This is consistent with information provided to NASA by the Physics Department indicating that no College of Science students had requested leave for childbearing or dependent care in the past five academic years. The University does provide child care subsidies for approved students, but this type of data is not known for specific Colleges or Departments.

b. Safety

The students interviewed uniformly believed that the campus is safe for women and men. They routinely referred to the presence of police (campus and public service), shuttle service, on-demand rides for those who are studying late and the well-lit facilities. There was consensus among students that while they may be concerned about safety away from campus, safety on campus is not a major concern, in large part due to efforts undertaken by the university.

⁵⁴ Education programs or activities, 14 C.F.R. § 1253.400(b)(7).

⁵⁵ Specifically discriminatory acts prohibited, 14 C.F.R. § 1250.103-2(a)(3).

One undergraduate student stated that she is aware of the “Oasis Program,” which is a resource for many kinds of crises. She also knows of the “Safe Ride” program which she believes ought to be a really great resource. However, she reported that she has personally not had a good experience with the program, because whenever she has called they were really busy. However, during those times, she was not worried for her safety and knows that there is a high campus police presence.

One male student stated that he believes the environment is a safe one and noted the presence of people generally around, the adequate lighting and the readily available transportation via bus and shuttle. Another male student stated that “there is a level of caution when it is dark and you are walking alone,” and that he and his friends coordinate to ensure that they don’t have to walk alone on campus at night. He is aware of measures such as intercoms, push buttons to alert Tucson police, on-campus police and taxi services operated by UA and that one can also organize a ride from the “Safe Ride” program.” Several other students also noted the campus police presence, emergency phones and safe rides as reasons why they believe they are physically safe on campus.

3. *Compliance Assessment*

a. Parental/Marital Status

NASA’s review did not indicate different treatment or impact based on gender with regard to the University’s or the Physics Department’s policies relating to parental or marital status.

b. Safety

NASA’s review did not indicate that any Physics student’s program participation was limited based on gender with regard to the University’s or the Physics Department safety/security policies and procedures.

2. *Recommendation*

Parental/Marital Status

The University and the Department of Physics should consider ways to better publicize information regarding child care subsidies and the Sick Child and Emergency/Back-Up Care Program, including efforts to make such information available to both applicants and enrolled students.

3. *Promising Practice*

Safety

UA’s Oasis Program was established to provide a variety of services to UA students, staff, and faculty who are impacted by sexual assault, relationship violence, and stalking. The Oasis Program partners with Tucson community service agencies to provide coordinated responses to, and work toward the prevention of, all forms of interpersonal violence. The Program’s mission/goal is particularly effective in stating the need for its services, stating that Oasis serves to “contribute to the quality of the overall campus climate, to the safety, empowerment and healing

of victim/survivors, to the accountability of offenders, to the success of students remaining productive in their role as students and in the pursuit of their degrees, and to the success of staff and faculty remaining productive in their role as employees.”

III. CONCLUSION

NASA finds UA in compliance with Title IX regulatory provisions regarding Title IX coordination, adoption of grievance procedures, policy dissemination and self-evaluation, and has provided recommendations to assist in strengthening existing compliance.

However, based on interviews and the results of the Physics Graduate Student Council survey, NASA is concerned about the overall environment in the Physics graduate program, and its potential for limiting, on the basis of sex, advantages or opportunities in the Physics Department.⁵⁶ UA and the Physics Department must take steps to ensure that inappropriate conduct based on gender does not occur. NASA notes that UA has already begun to take such steps, in part through an Administrative Review of the Department conducted by the University’s Office of Equal Opportunity and Affirmative Action, and through the provision of additional training. NASA has provided recommendations to address these concerns and will follow-up with UA to ensure that they are implemented in a timely fashion.

⁵⁶ See 14 C.F.R. § Sec. 1253.400(b)(7) (stating that a recipient “shall not, on the basis of sex, otherwise limit any person in the enjoyment of any right, privilege, advantage, or opportunity.”).