APS Bridge Program Webinar

24 October 2012

APS Bridge Program: Request for Proposals

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American Physical Society
Director of Education and Diversity

Joint Diversity Statement

08.2 JOINT DIVERSITY STATEMENT
(Adopted by APS, NSBP, NSHP in 2008)

To ensure a productive future for science and technology in the United States, we must make physics more inclusive. The health of physics requires talent from the broadest demographic pool. Underrepresented groups constitute a largely untapped intellectual resource and a growing segment of the U.S. population.

Therefore, we charge our membership with increasing the numbers of underrepresented minorities in physics in the pipeline and in all professional ranks, with becoming aware of barriers to implementing this change, and with taking an active role in organizational and institutional efforts to bring about such change. We call upon legislators, administrators, and managers at all levels to enact policies and promote budgets that will foster greater diversity in physics. We call upon employers to pursue recruitment, retention and promotion of underrepresented minority physicists at all ranks and to create a work environment that encourages inclusion. We call upon the physics community as a whole to work collectively to bring greater diversity wherever physicists are educated or employed.

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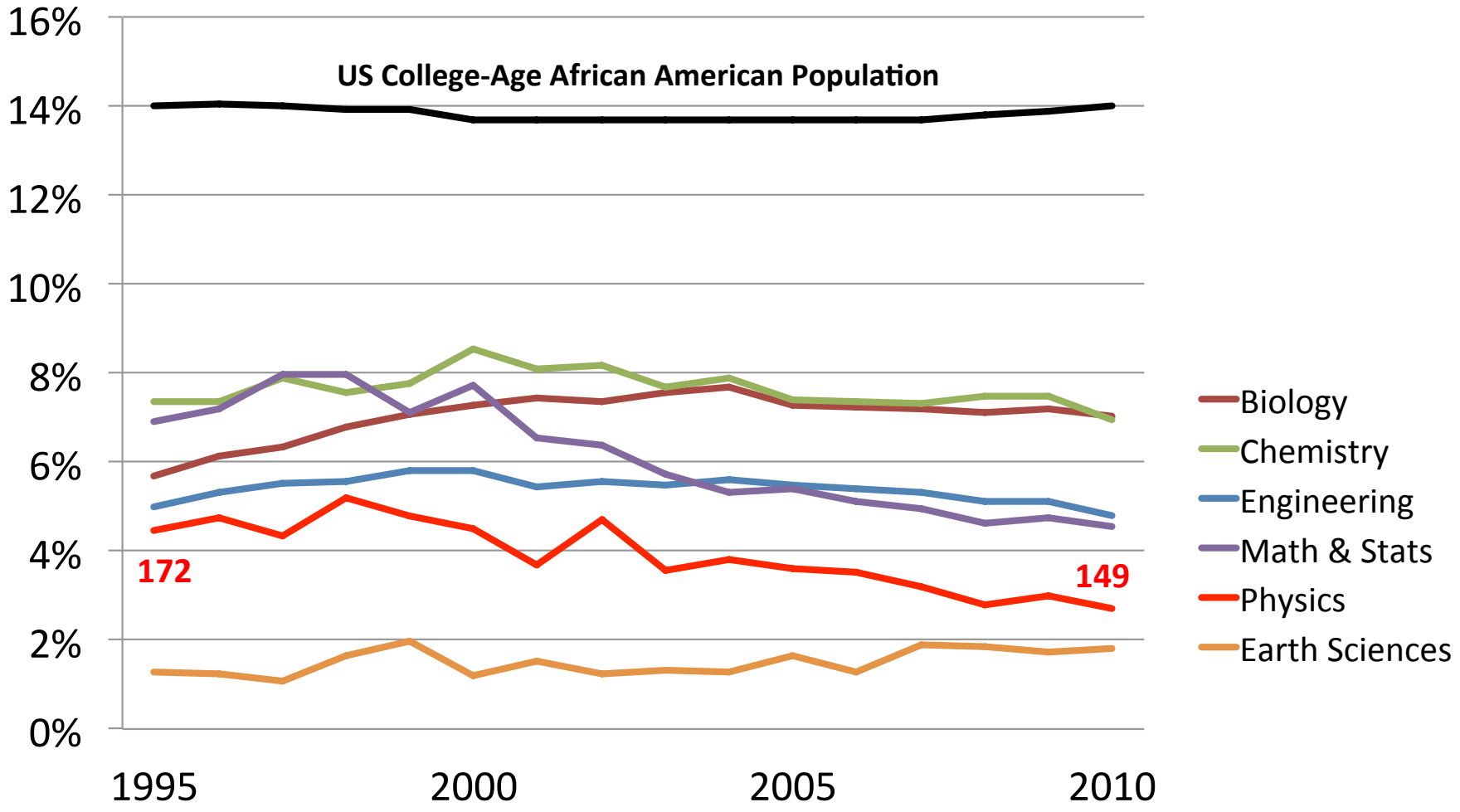
African American Undergraduate Majors



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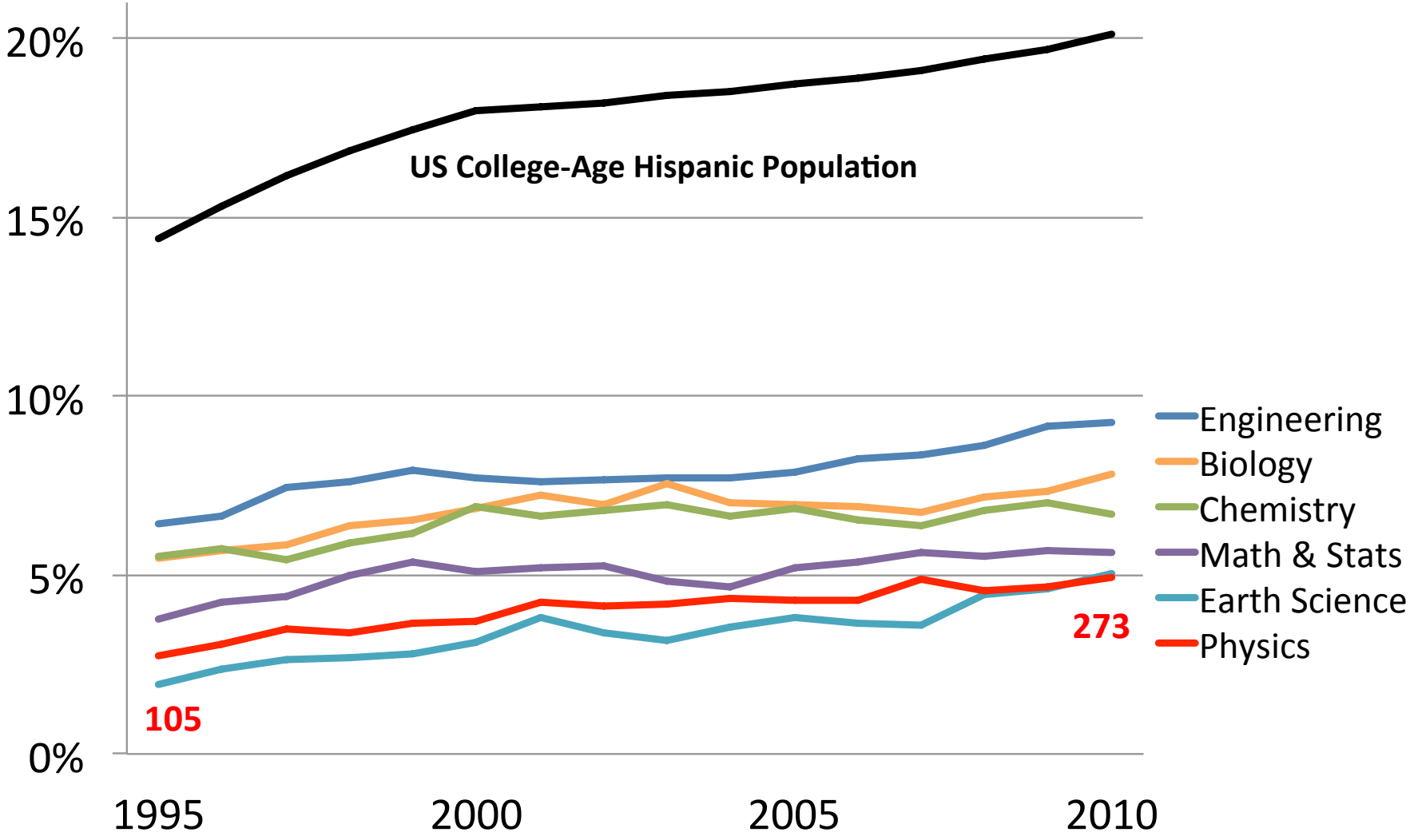
Hispanic Undergraduate Majors



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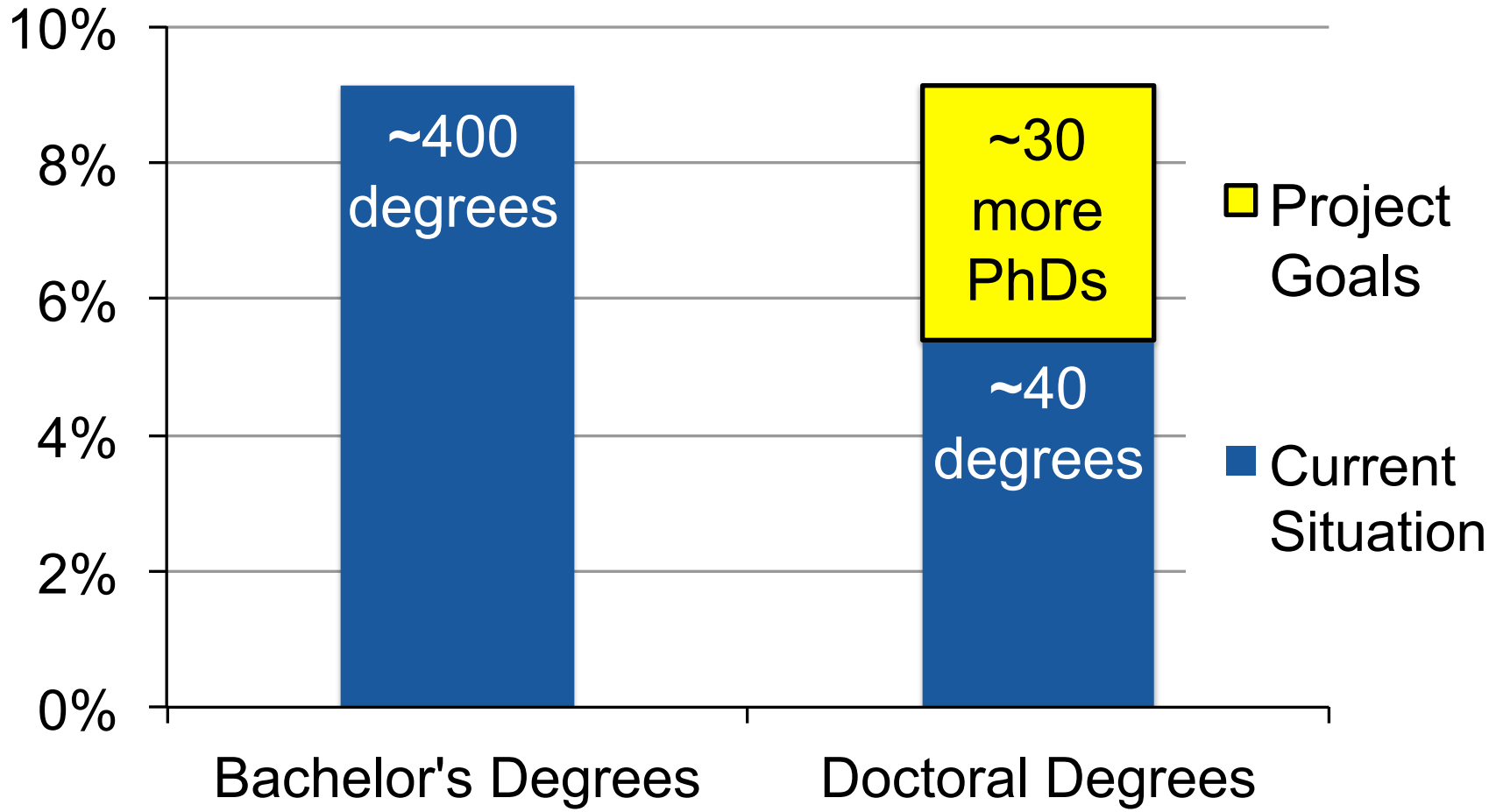
Physics Degrees Awarded to Underrepresented Minorities



Source: IPEDS, US Census

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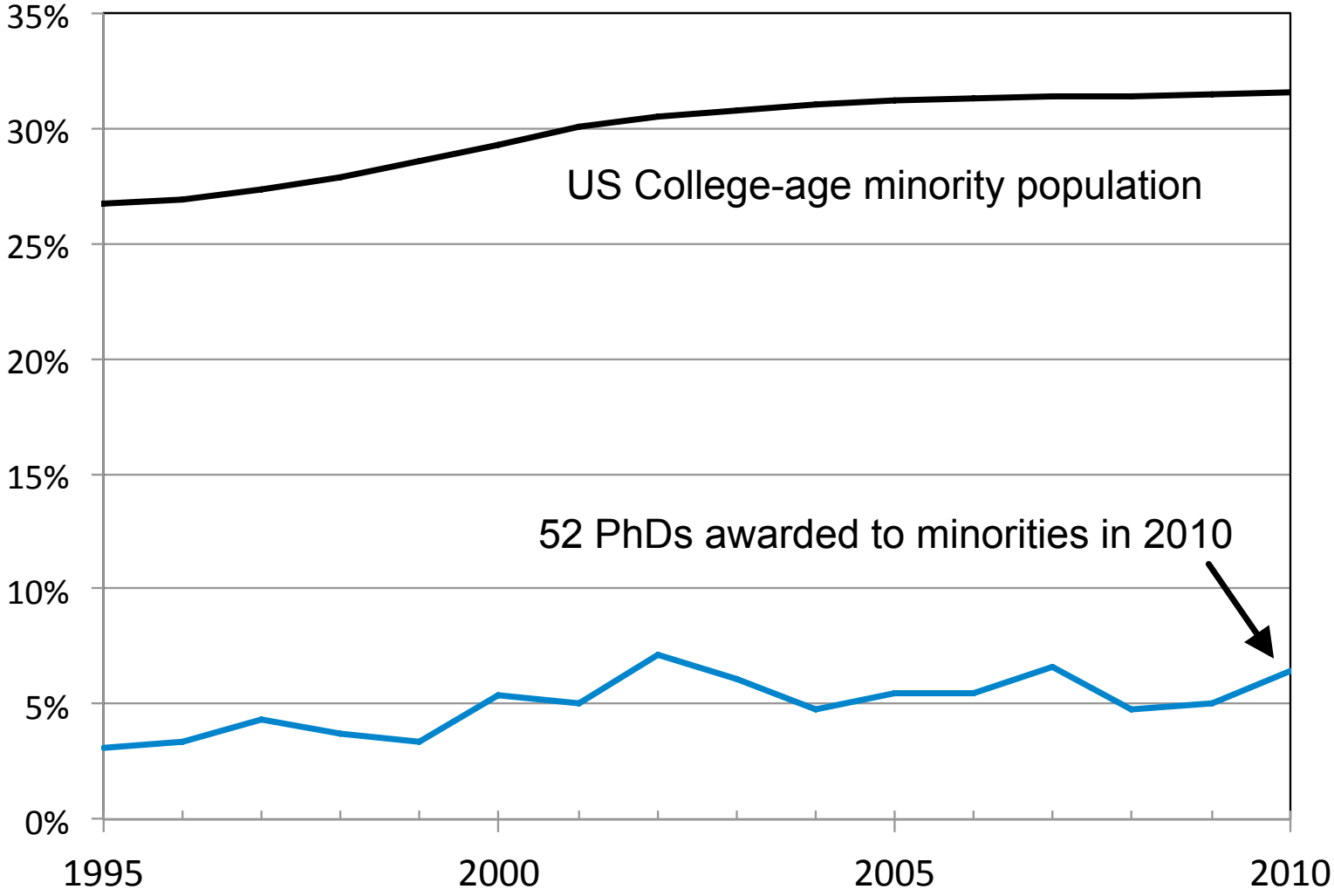
URM Physics PhDs to Minority Population



Sources: IPEDS Completion survey by race, US Census

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APS Bridge Program: Project Goals

- Increase, within a decade, the fraction of physics PhDs awarded to *underrepresented minority* students to match the fraction of physics Bachelor's degrees granted to these groups
- Develop, evaluate, and document sustainable model bridging experiences that improve the access to and culture of graduate education for *all* students, with emphasis on those underrepresented in doctoral programs in physics
- Promote and disseminate successful program components to the physics community

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Steering Committee

- Bernadette Cogswell (Vanderbilt Graduate Student)
- Ximena Fernández (Columbia Graduate Student)
- J.D. Garcia (University of Arizona)
- Yolanda George (AAAS)
- Paul Gueye (President, NSBP)
- Wendell Hill (University of Maryland, College Park)
- Anthony Johnson (University of Maryland, Baltimore County)
- Ramon Lopez (UT Arlington)
- Steve McGuire (Southern University)
- **Cherry Murray, chair** (Harvard, APS President 2009)
- Luz Martinez-Miranda (President, NSHP)

APS Staff

- Theodore Hodapp
- Arlene Modeste Knowles
- Bushraa Khatib (Project Coordinator)
- Monica Plisch

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Existing Bridge Programs in Physics

- Fisk / Vanderbilt
- Columbia University
- University of Michigan
- MIT (just starting)

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APS Bridge Program: Key Components

- Recruiting through graduate programs across the US (58, representing 40% of all PhD students)
- Spend 1-2 years in a "Bridging program"
  - Take advanced UG or entry-level graduate coursework
  - Graduate-level research
  - Demonstrate ability to do independent research and succeed in graduate-level coursework
  - Receive coaching on preparing graduate admissions package (letters, GRE, statements)
  - Accepted into doctoral program
- Receive mentoring in doctoral program (especially in first years)
- Research into barriers; disseminate successful program elements
- Build a national coalition of departments committed to improving participation; connect institutions

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Levels of Participation

- Member Institution
- Partnership Institution (doctoral only)
- Bridge Site (graduate only)

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Levels of Participation

- Member Institution
  - All institution types
  - Free membership
  - Discounts to attend workshops
  - Annual reporting requirement
- Partnership Institution (doctoral only)
- Bridge Site (graduate only)

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Levels of Participation

- Member Institution
- Partnership Institution (doctoral only)
  - Agree to work closely with APS Bridge Fellows as they start their doctoral studies
  - One-time grant of up to $10k to implement mentoring
  - Application process, COM approval (video "site" visit)
  - Work with APS to gather data on success of efforts
  - Separate RFP process (early 2013)
- Bridge Site (graduate only)

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Levels of Participation

- Member Institution
- Partnership Institution (doctoral only)
- Bridge Site (graduate only)
  - This RFP
  - Provide bridging experience for students between undergrad and doctoral degrees
  - Funds to pay stipends for APS Bridge Fellows, small amount of management, travel
  - Success measured against number that successfully matriculate and then graduate from PhD programs

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Site Eligibility

- Physics Doctoral or Master degree granting department
- Able to absorb 2 bridge students into research program annually
- Institutional support and commitment
- Member Institution

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Bridge Sites

- Can follow existing models, or a new one that is best suited to your institution
  - Master's directed toward a PhD (Fisk, MI)
  - Post-baccalaureate program (Columbia, MIT)
- Build a sustainable model with institutional support
- Two students per year on average
- Success measured against student progress
- For existing programs, must show increases

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Bridge Sites

- Recruitment (APS, and institution)
- Admission decisions (how, what criteria)
- Financial support (how much, and timescale)
- Multiple Mentoring (who, how interactions work)
- Community (induction, socialization)
- Coursework (advising, physics and other courses)
- Research (appropriate matching)
- Progress monitoring (coursework, tutors if needed, research "fit")
- Application coaching (GRE, statements, schools)

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Project Budgets

- $20k per student (total, 2 max) per year
- $10k operations per year
- Travel
- No overhead on student stipends
- Overhead limited to 35%
- Awards for 3 years

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Student Eligibility

- Bachelor's degree in physics or closely related discipline
- US citizen or permanent resident
- Either:
  - Did not apply to graduate program this year
  - Applied but was not accepted
  - Applied but did not accept offer
- Be committed to improving diversity in physics
- Meet individual requirements of the institution

Students may not be currently enrolled or have an existing physics graduate degree

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Selection Criteria

- Diverse set of institutional models
- Unique ways to build cohorts of URM students
- Innovative ways to sustain activities
- Perhaps models that build in corporate support

- Follow demonstrated practices
- Comprehensive institutional programs to support students
- Clear departmental support
- ~100% success

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Deadlines

- 3-page pre-proposals due 26 November, 5 p.m. ET
- Review selects small number to go to full proposals by mid-December
- 15-page full proposals due 1 February, 5 p.m. ET
- Review by external/internal panel
- Site selection by mid-spring
- First students selected May
- First annual meeting 27-29 June 2013
- Funding starts summer

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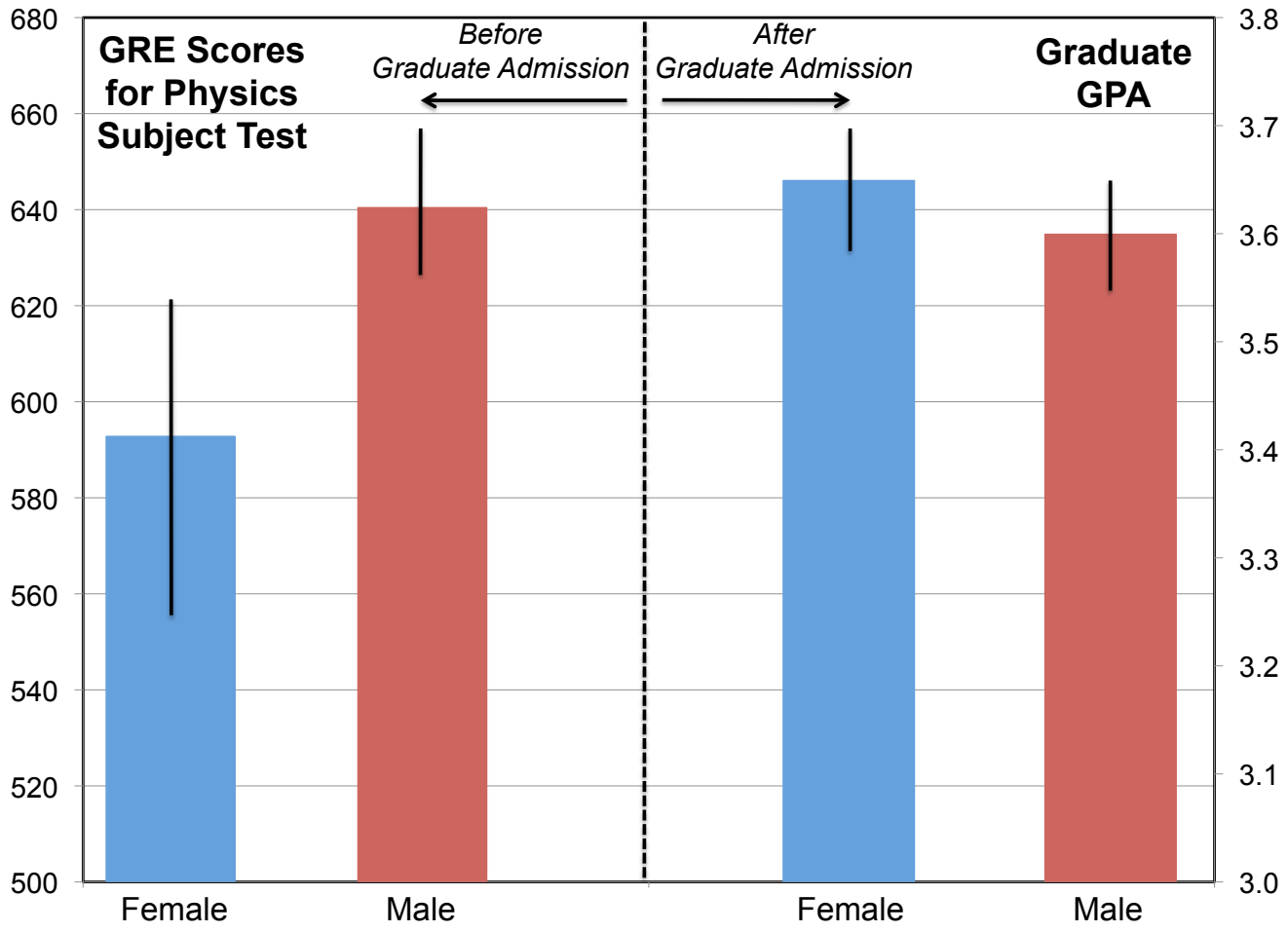
Admissions Bias?



Source: PhD Recipients from Oregon State University

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