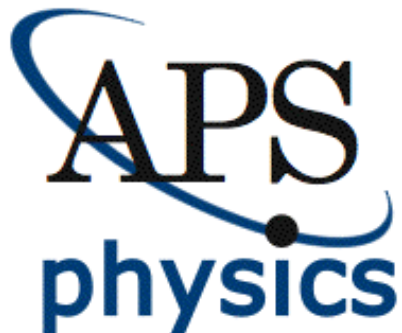


APS Bridge Program

27 June 2013

College Park, MD

APS Bridge Program

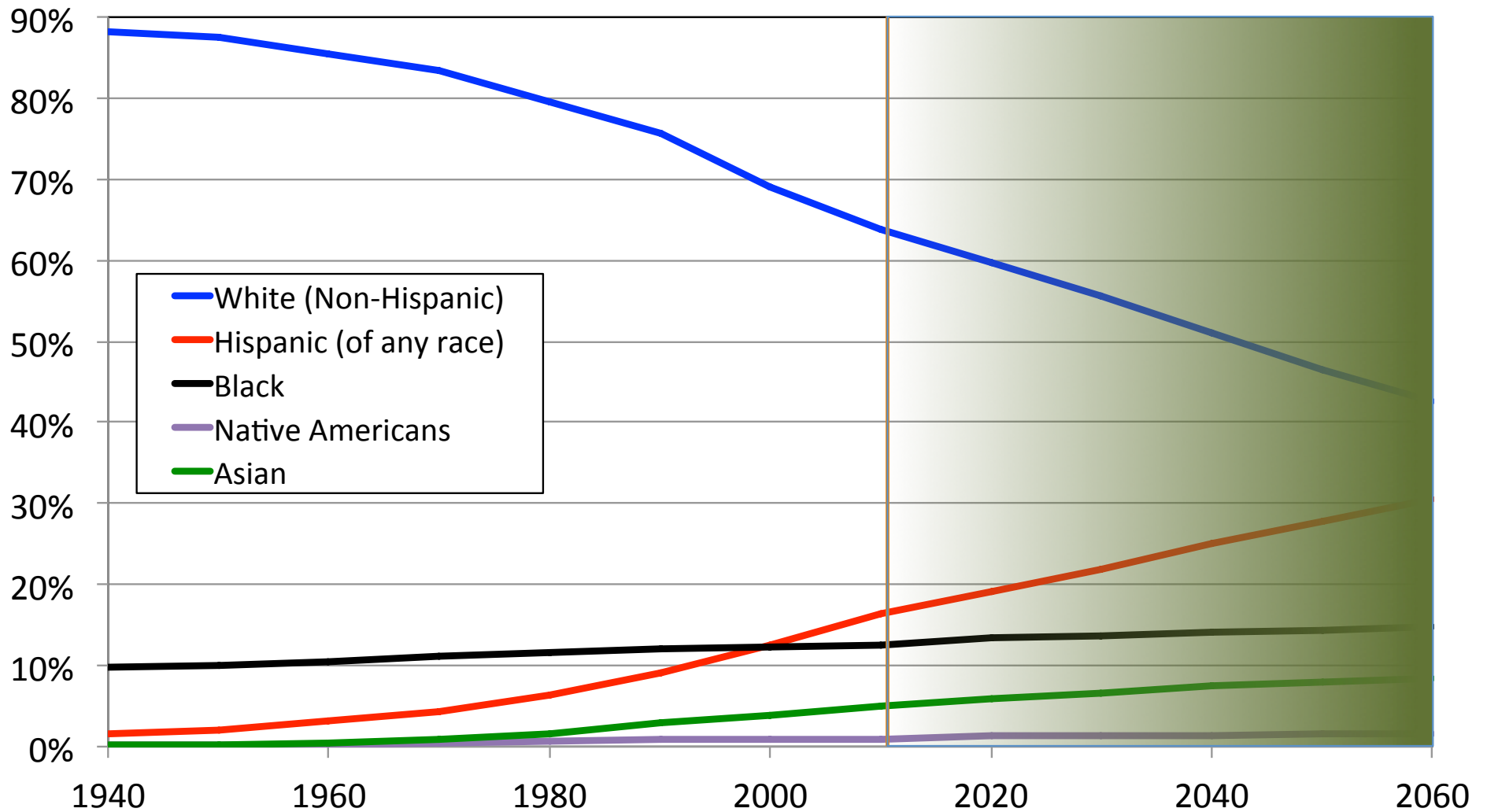


Theodore Hodapp

American Physical Society

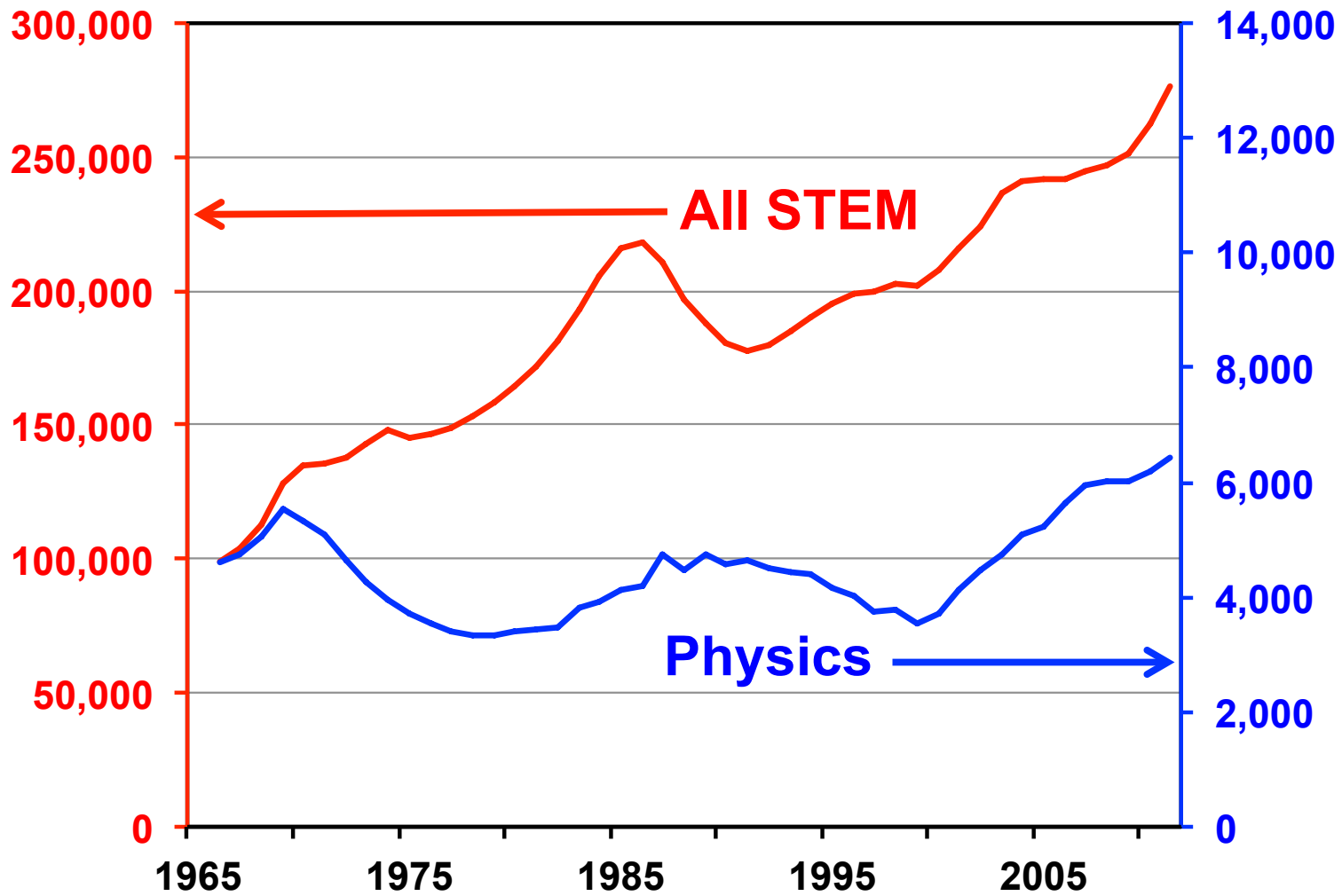
Director of Education and Diversity

US Demographics



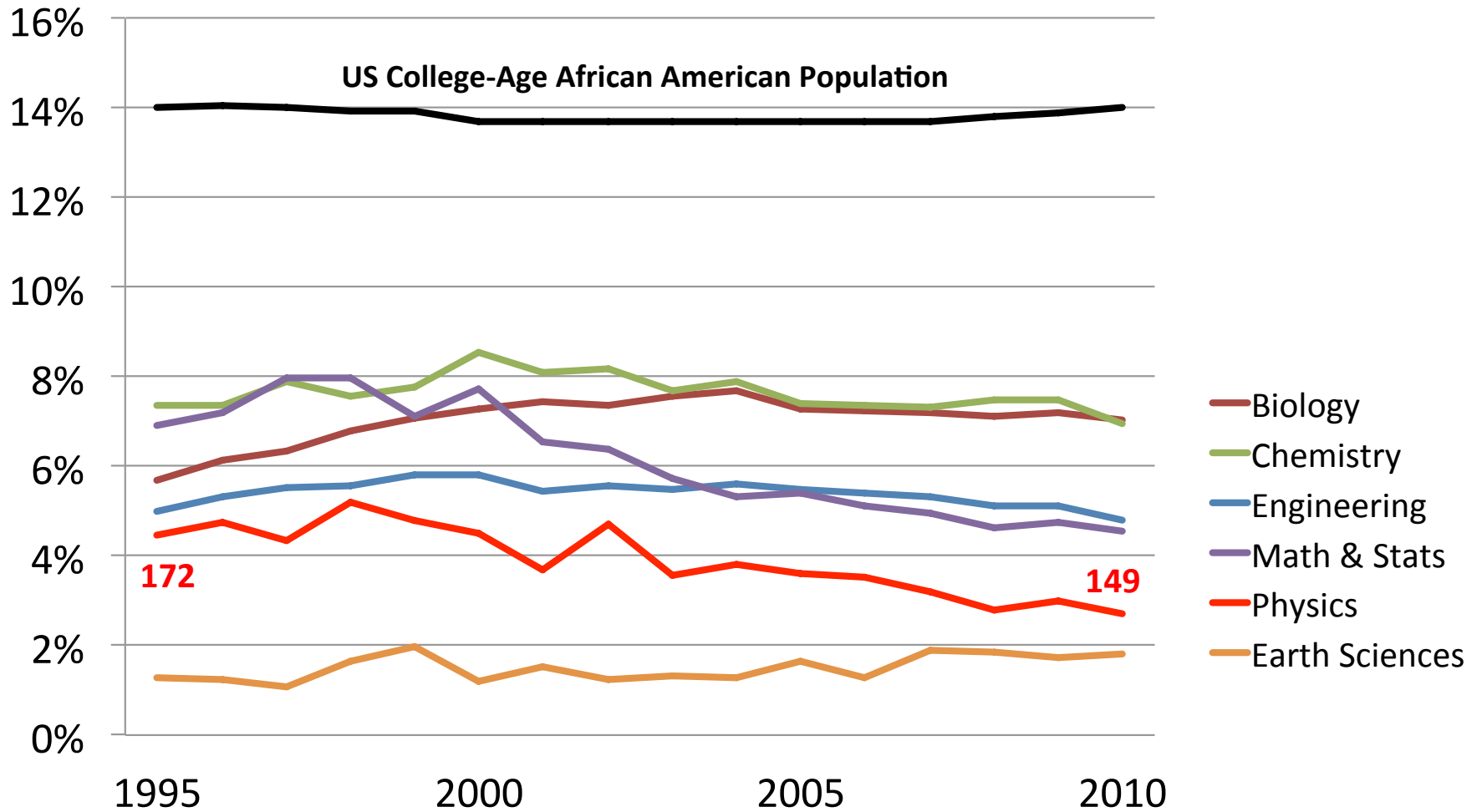
Source: US Census

Physics / STEM Bachelor Degrees

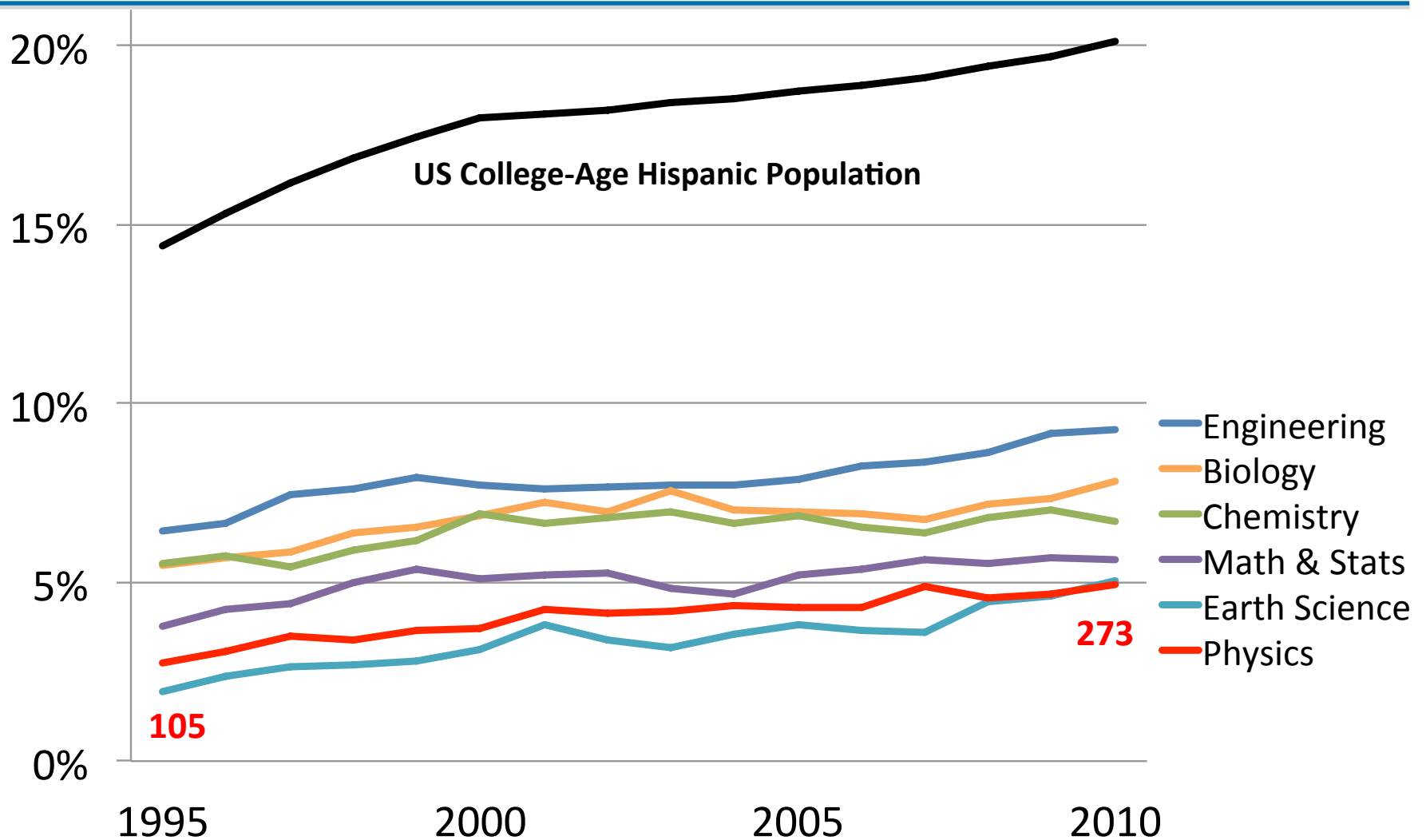


Source: IPEDS Completion Survey

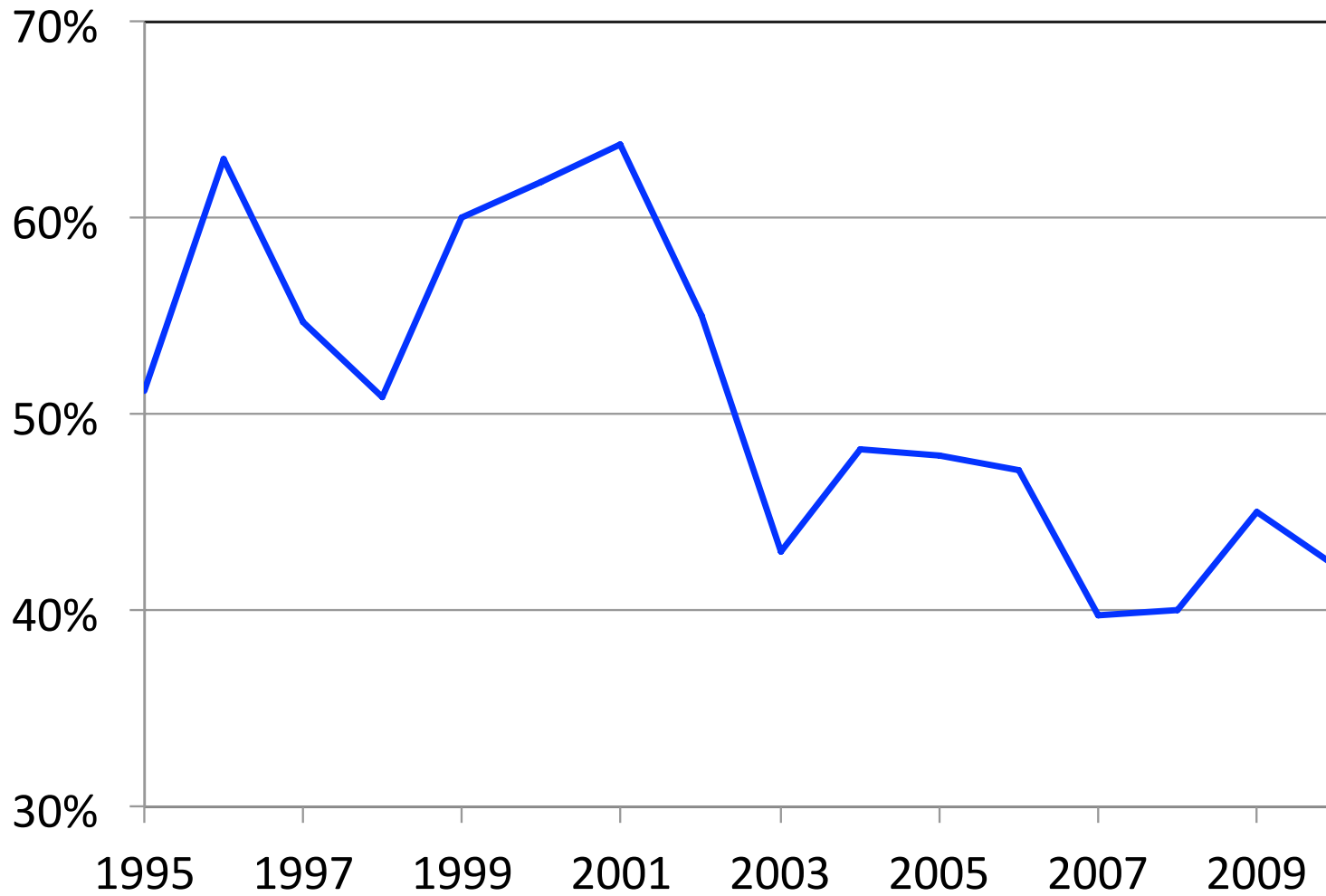
African American Undergraduate Majors



Hispanic Undergraduate Majors

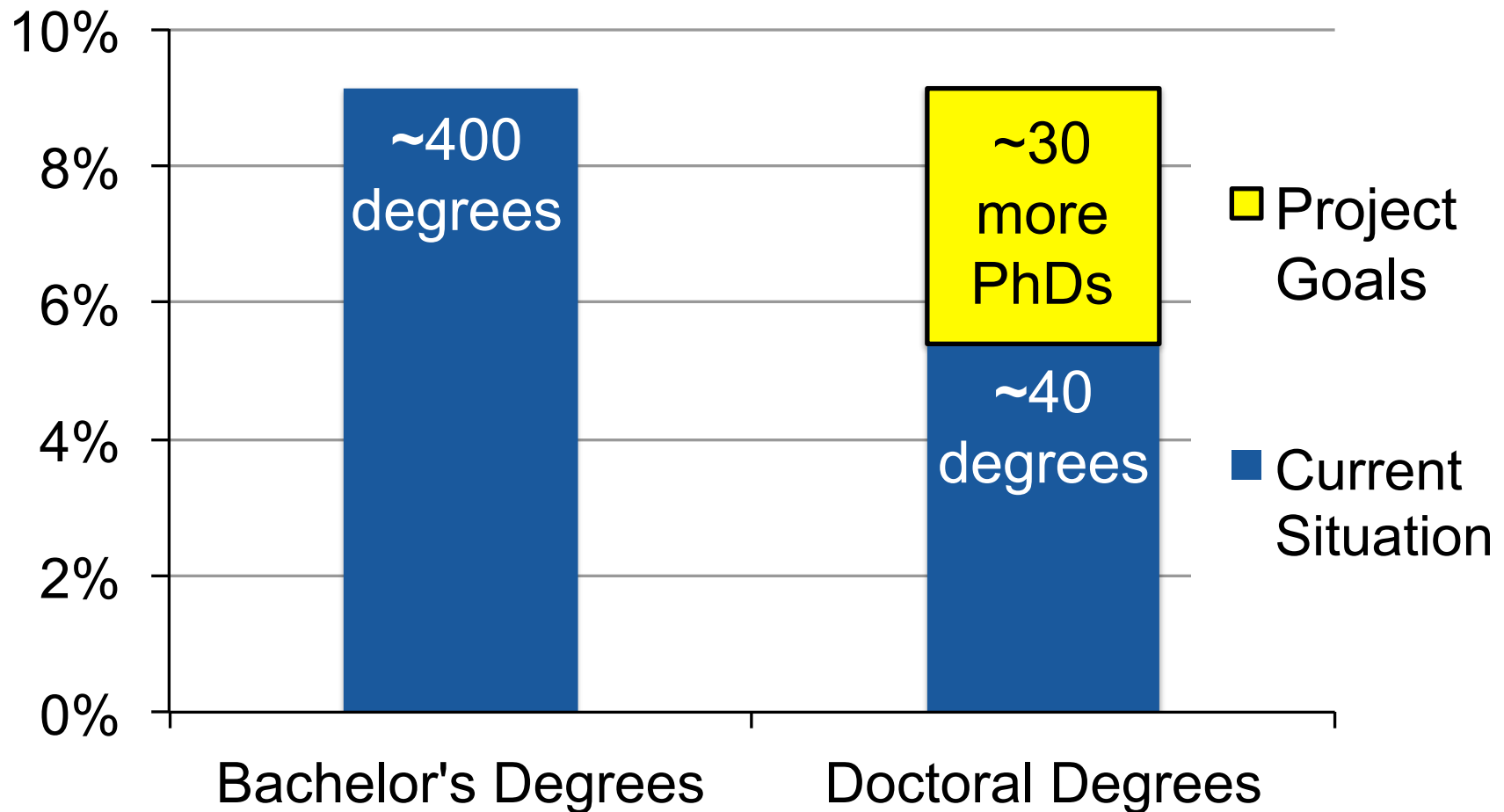


Percentage of African American Physics Majors from HBCUs



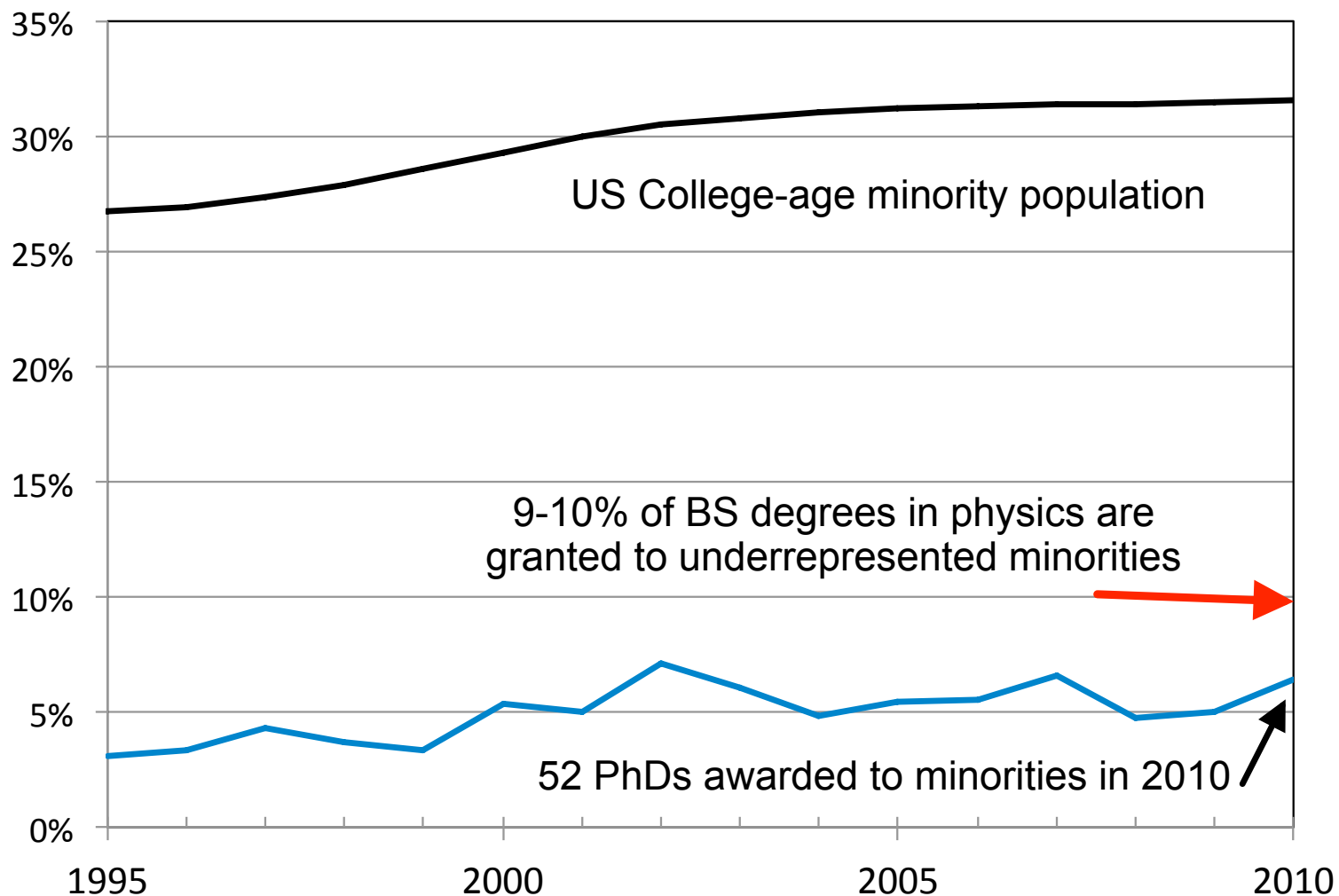
Source: IPEDS

Physics Degrees Awarded to Underrepresented Minorities



Source: IPEDS, US Census

URM Physics PhDs to Minority Population



Sources: IPEDS Completion survey by race, US Census

08.2 JOINT DIVERSITY STATEMENT

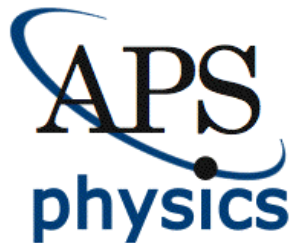
(Adopted by APS, NSBP, NSHP in 2008)

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.

APS Bridge Program: Project Goals

- Increase, within a decade, the number 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



APS Bridge Program: Key Components

- Recruiting through graduate programs across the US (now 100+ institutions, representing 70% of all doctoral students)
- Spend 1-2 years in a “Bridging program” (Could be Masters or post-bac in design)
 - 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

Existing Bridge Programs in Physics

- Fisk / Vanderbilt
- Columbia University
- University of Michigan
- MIT

- 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)

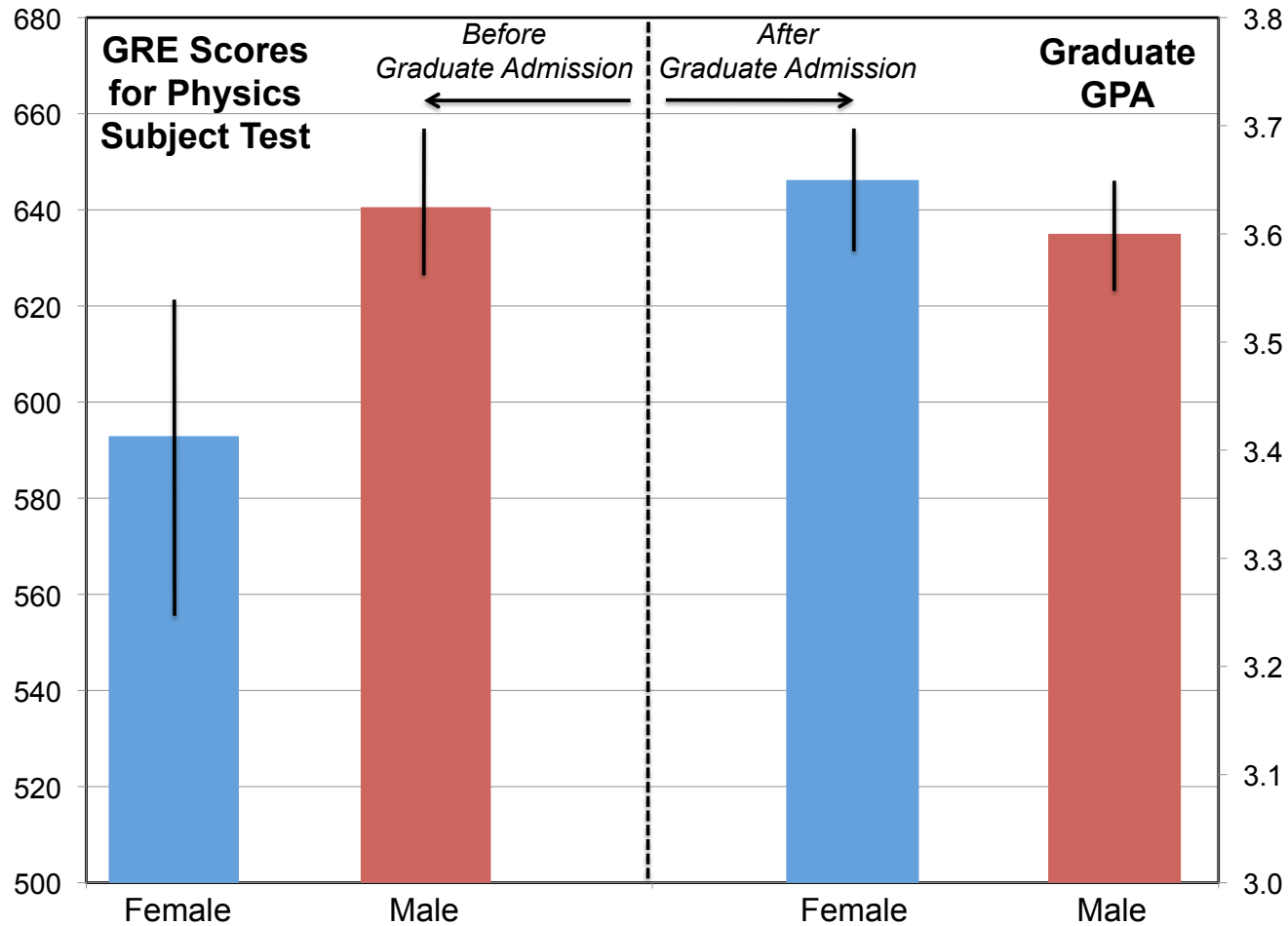
- Bachelor's degree in physics or closely related discipline
- US citizen or permanent resident
- Either:
 - Did not apply to graduate program this year
 - Applied but was not accepted
- Be committed to improving diversity in physics
- Meet individual requirements of the institution

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

- **Member Institution** (any institution)
Free; receive information / updates; reduced fees for APS-BP conferences
- **Partnership Site** (Doctoral granting institutions)
APS COM approval process; recommended site for Bridge Fellows (and others) to attend; demonstrate effective practices in graduate student support
- **Bridge Site** (MS or PhD granting)
Receive significant funding from APS; build sustainable program; prepare 2+ students each year for graduate study; significant institutional commitment

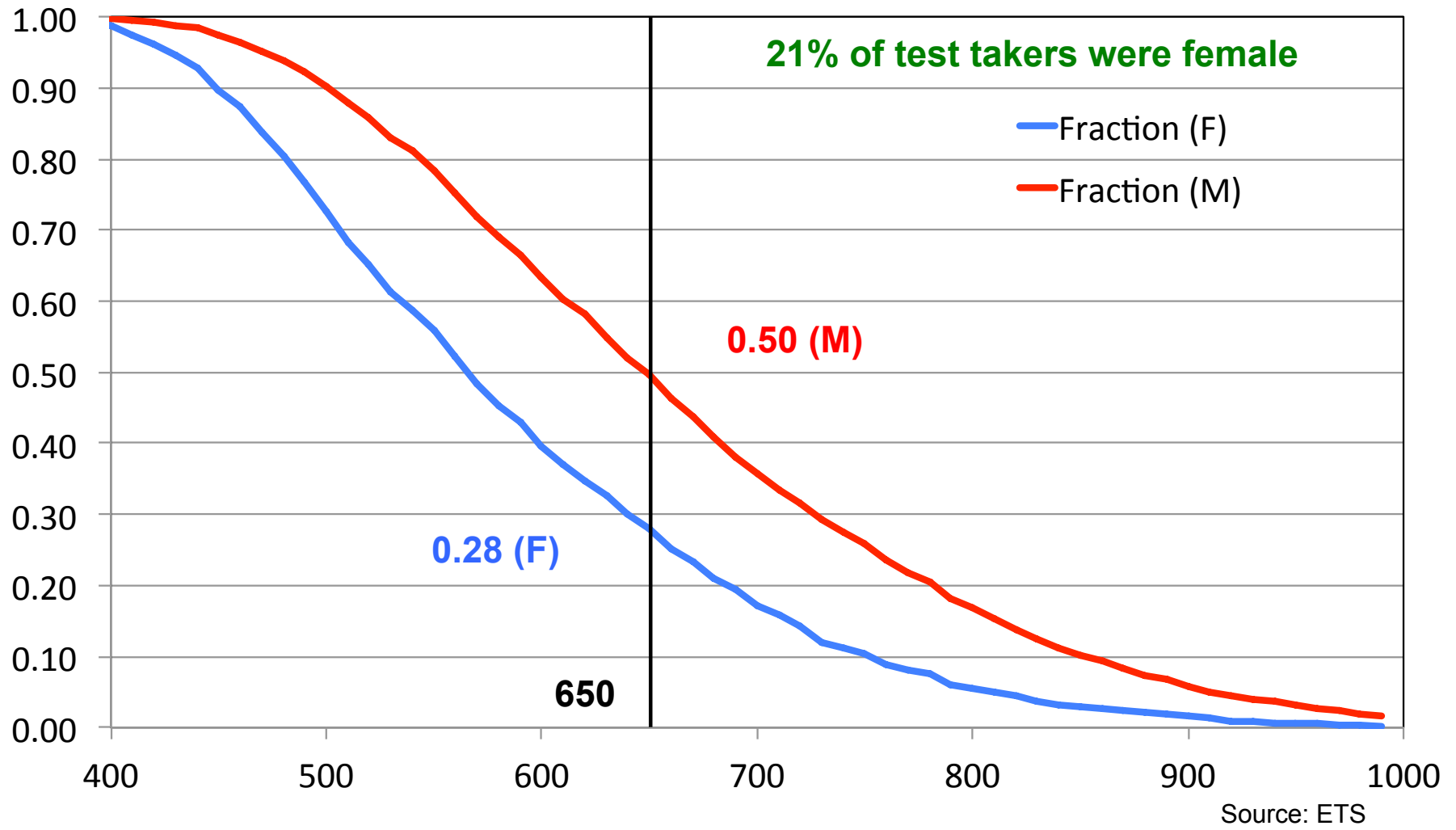
www.APSBridgeProgram.org

- Bridge Site Selection (2012-2013)
 - 24 Applicants
 - 7 Selected for full Proposals
 - 2 Sites awarded (Ohio State, South Florida)
- Student Recruitment (2013)
 - 28 complete applications
 - 7 selected for Bridge or Grad (direct) programs
 - 2 additional students admitted from site recruitment
 - 12 additional being vied for by other programs
 - ~10-12 into PhD programs from this year
- Admissions Study

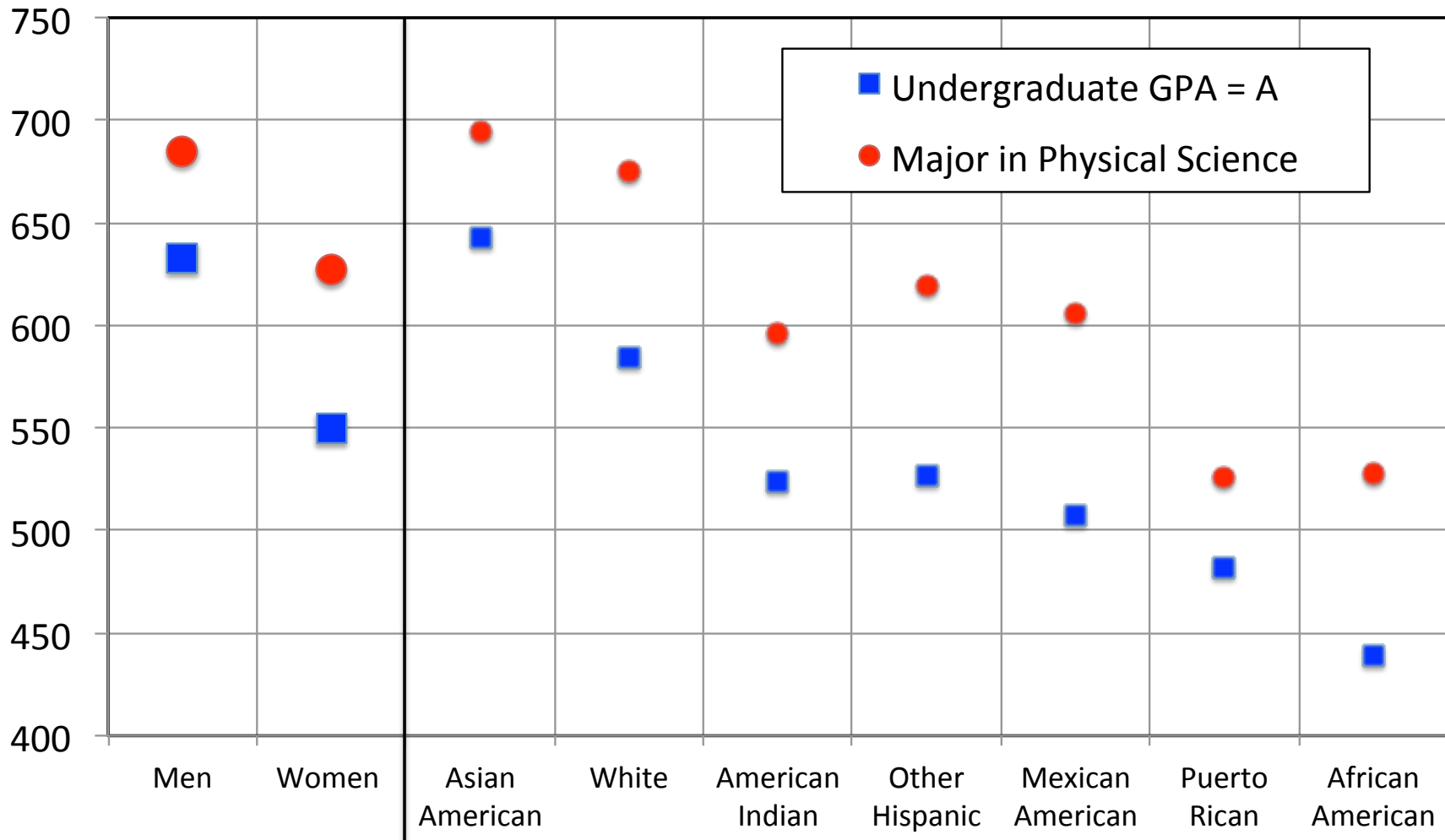


Source: PhD Recipients from Oregon State University

GRE Physics Scores: Impact of Cutoff Scores



GRE Quantitative Scores



GRE Quantitative scores for US Citizens

www.APSBridgeProgram.org

Source: ETS, "Factors that can influence performance on the GRE General Test 2006-2007"

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