

# AAPT Winter Meeting 2018



*8 January 2018*  
*San Diego, CA*

Supporting Teachers to Encourage Pursuit of  
Undergraduate Physics for Women

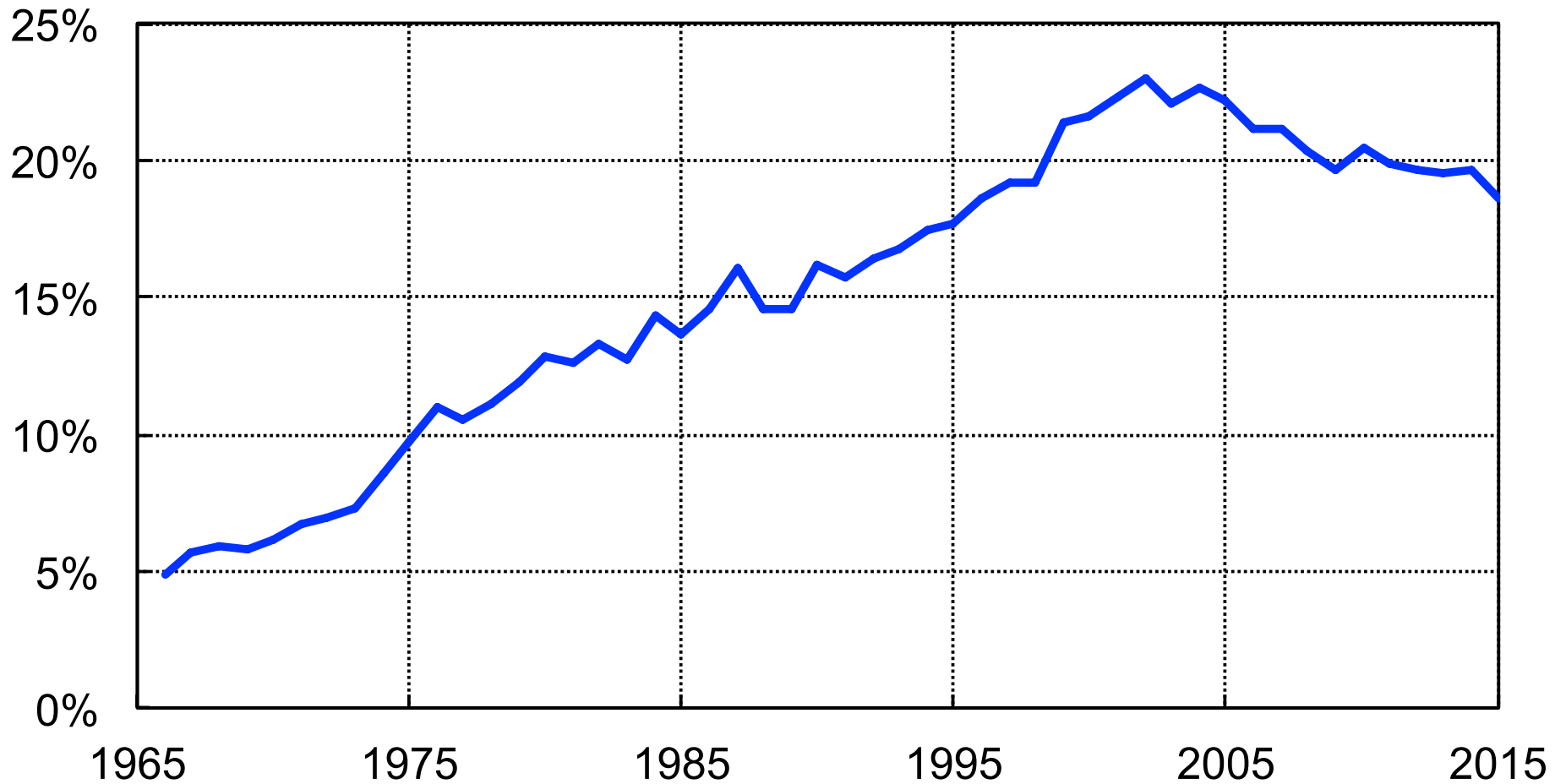
*Theodore Hodapp*

APS Director of Project Development





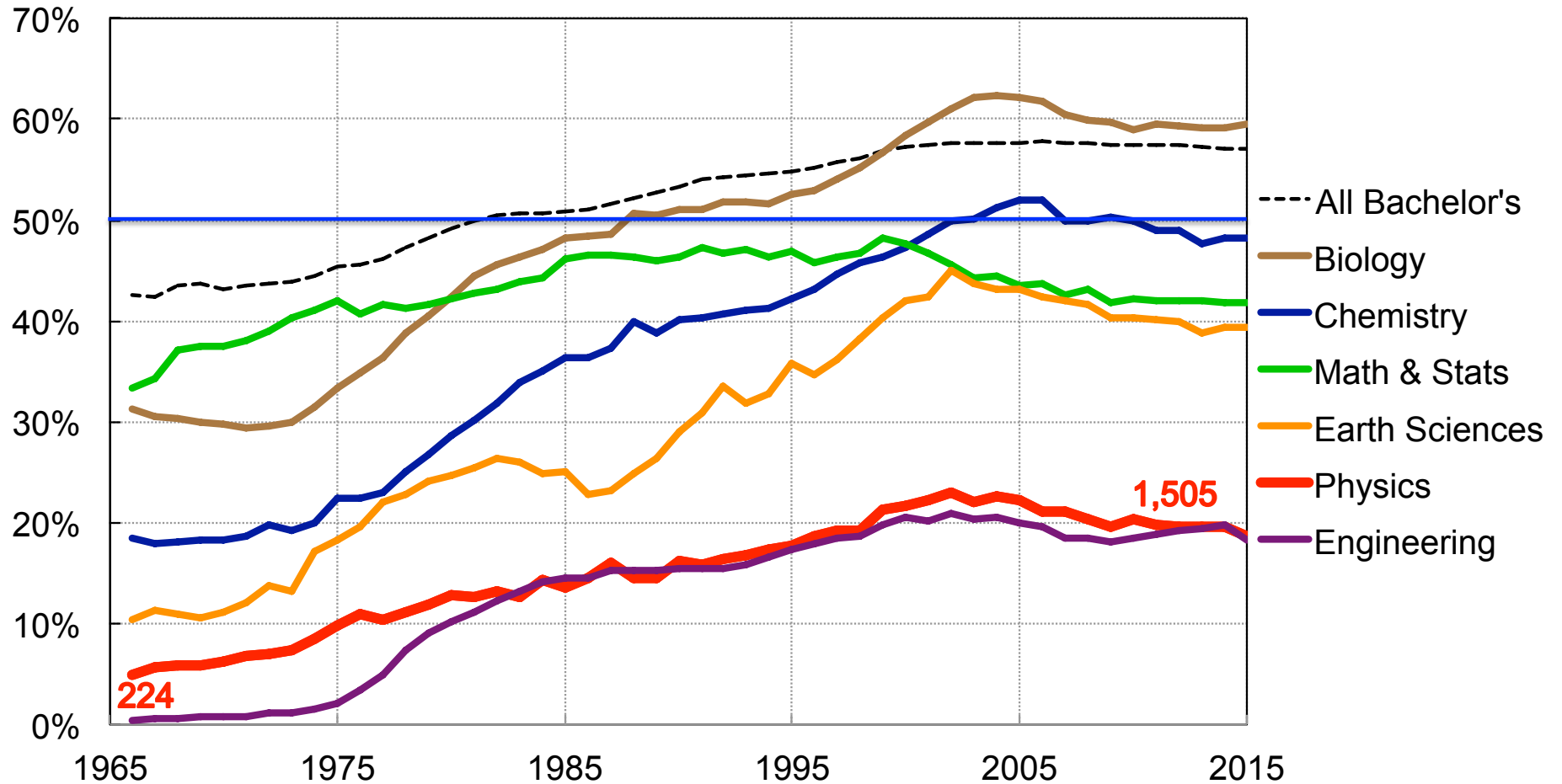
# Undergraduate Physics Degrees Awarded to Women



Source: National Center for Education Statistics and APS



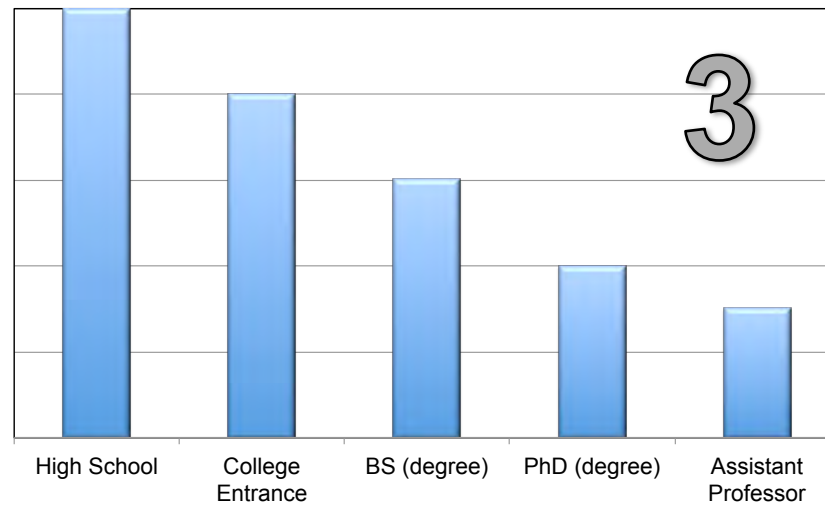
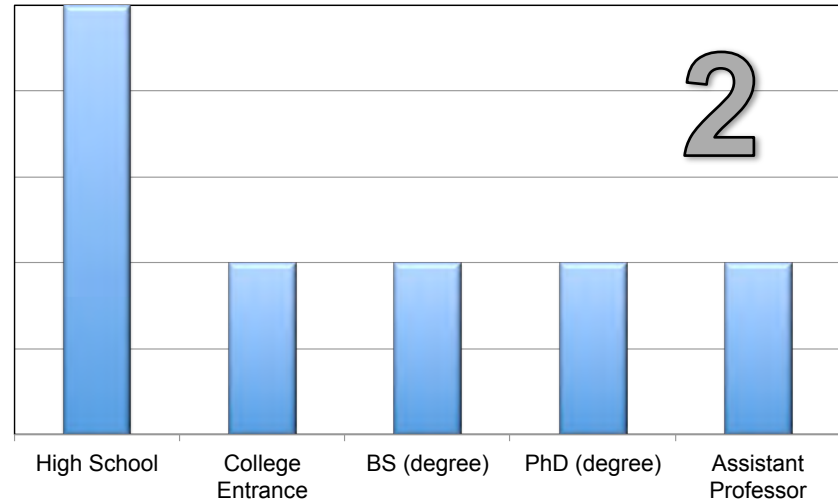
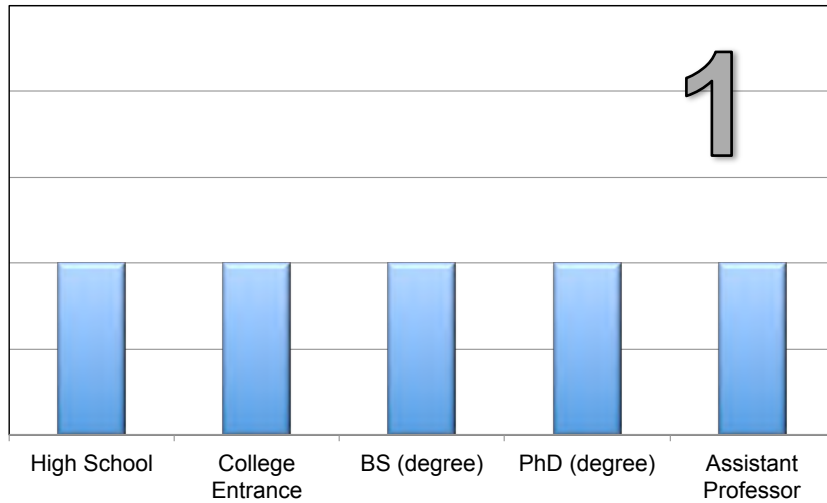
# Fraction of Women Earning Undergraduate STEM Degrees



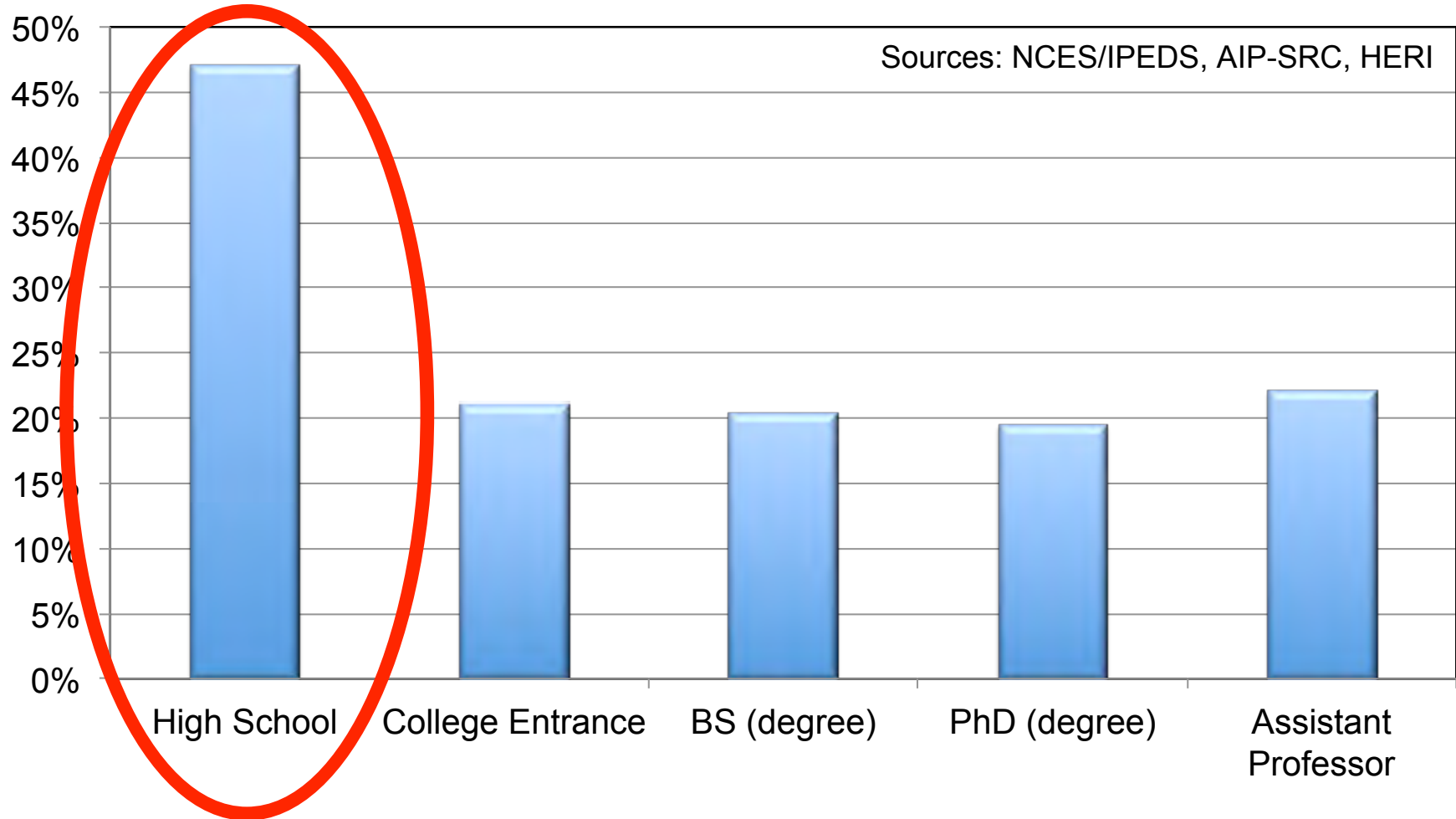
Source: National Center for Education Statistics and APS



# Quiz Time: Percentage of Women in Physics

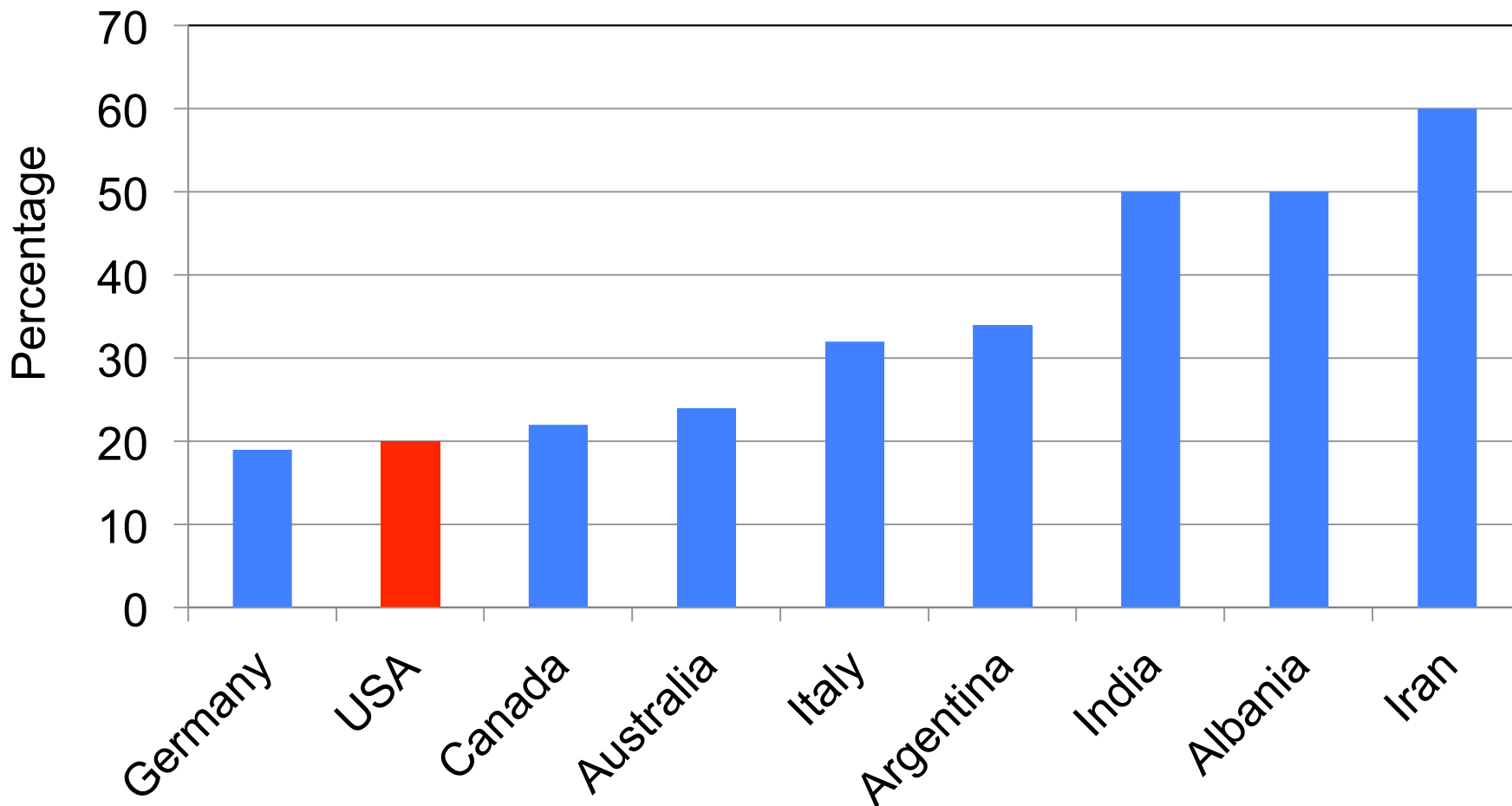


# Percentage of Women in Physics



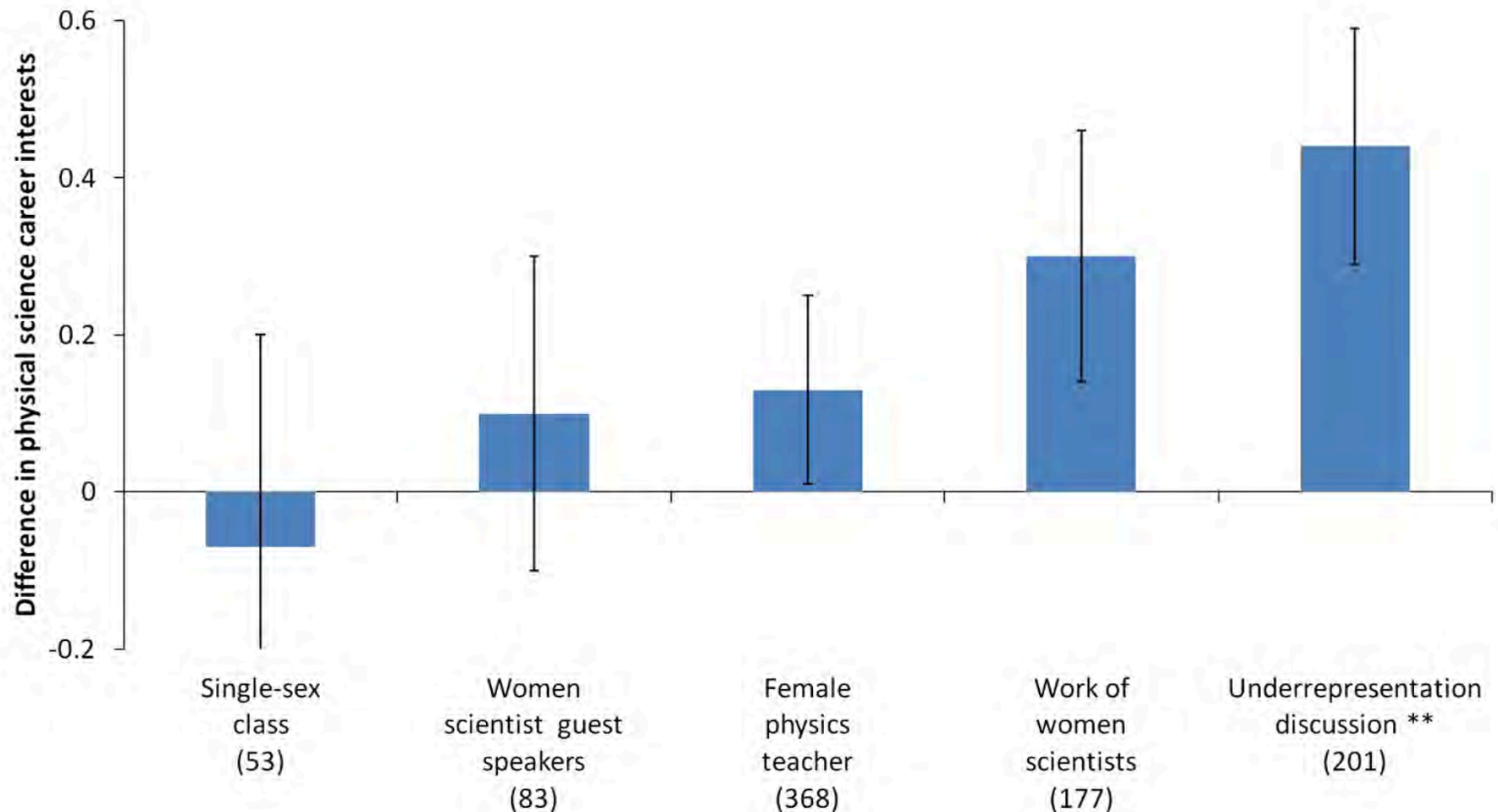


# Undergraduate Physics Degrees Awarded to Women



IUPAP International Conference on Women in Physics Proceedings (2005-2013)

## Effects of Interventions



Hazari, Potvin, Lock, Lung, Sonnert, and Sadler, "Factors that affect the physical science career interest of female students: Testing five common hypotheses," PRST PER 9 020115 (2013)



# STEP UP for Women

Supporting Teachers to Encourage Pursuit of Undergraduate Physics for Women

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## NSF funding received May 2017 (\$3M)

- Zahra Hazari, Geoff Potvin, Laird Kramer (FIU)
- Robynne Lock (TAMUC)
- Rebecca Vieyra (AAPT)
- Kathryne Woodle, Theodore Hodapp (APS)



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# STEP UP for Women

Supporting Teachers to Encourage Pursuit of Undergraduate Physics for Women

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- 4+ year project; 3 Phases:
  - 2017-18: Pilot (10 Master teachers across the US)
  - 2018-19: Controlled study (26+ randomly selected in 3 states)
  - 2019-20: National rollout (15,000 teachers)
- Designing curriculum/classroom strategies for high school teachers to encourage women to study undergraduate physics:
  - Lessons:
    - Discussion of underrepresentation
    - Discussion of careers in physics
  - Classroom strategies:
    - Personal recruiting
    - Public recognition of women in classroom



# STEP UP for Women

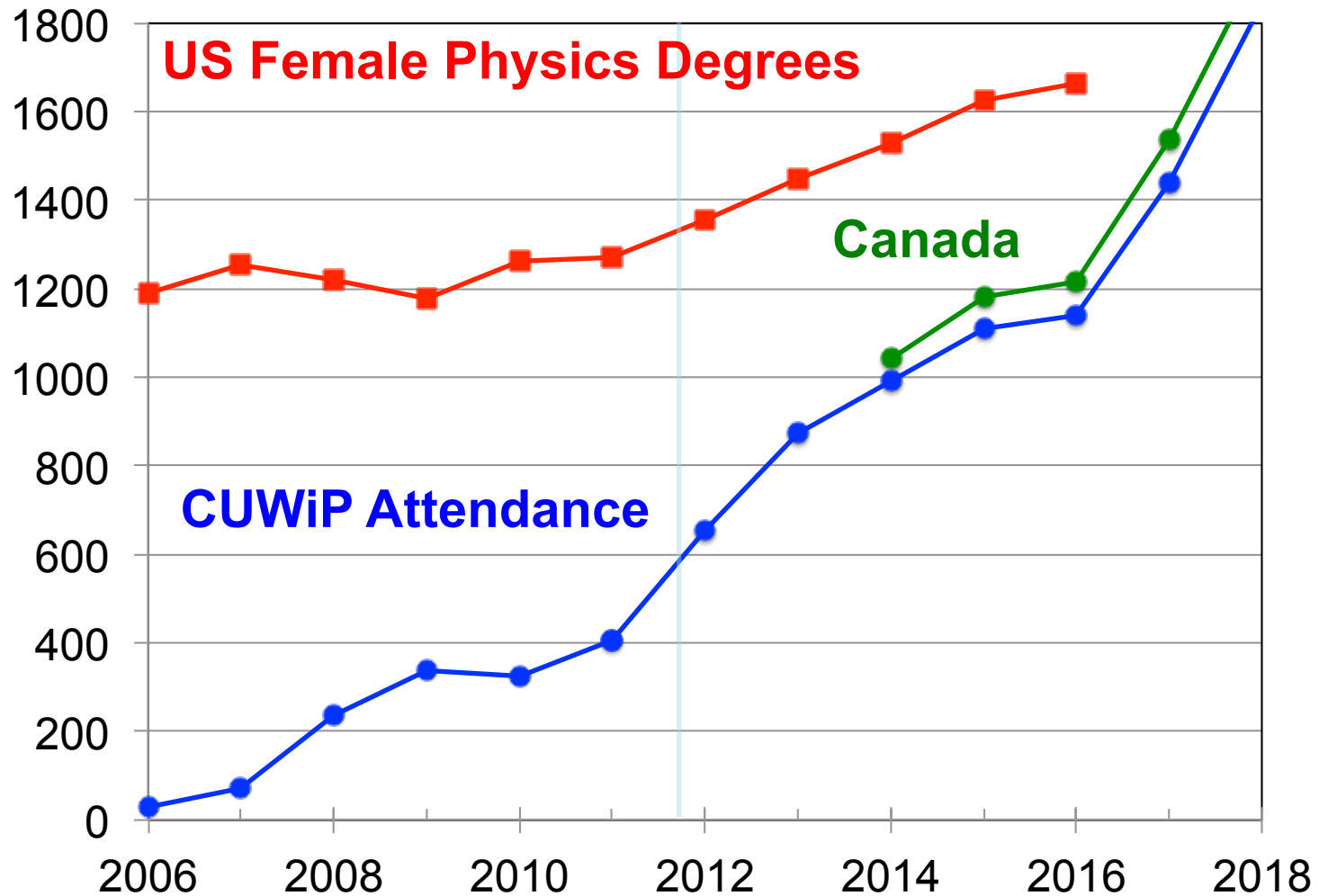
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- **Rollout (Phase 3):** Pilot ideas in 2017, 2018
  - APS CUWiP workshops and “challenges”
  - APS sponsored Women in Physics Groups
  - SPS Chapters
  - National, state, and regional meetings for science teachers
  - Establish teacher networks
  - Develop Professional Development “lessons”
  - Website: tools, video, resources
  - Assessment: rate of adoption, problems of implementation, etc.



# APS Conferences for Undergraduate Women in Physics (CUWiP)





## Project Team: Go Big or Go Home!

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