

What we learn from the Statistics: Challenges to Institutions: Recruitment, Hiring, Retention, Promotions

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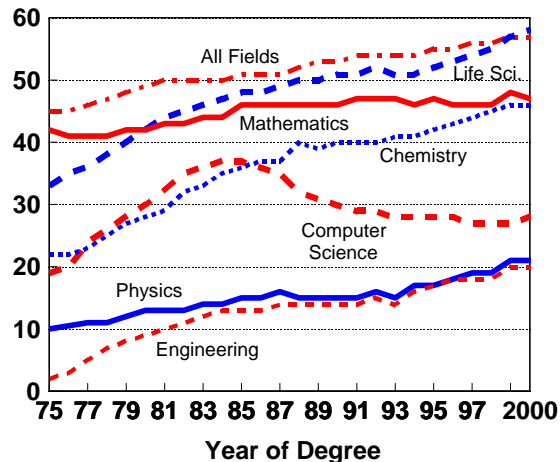
Cambridge, MA

APS Gender Equity Workshop

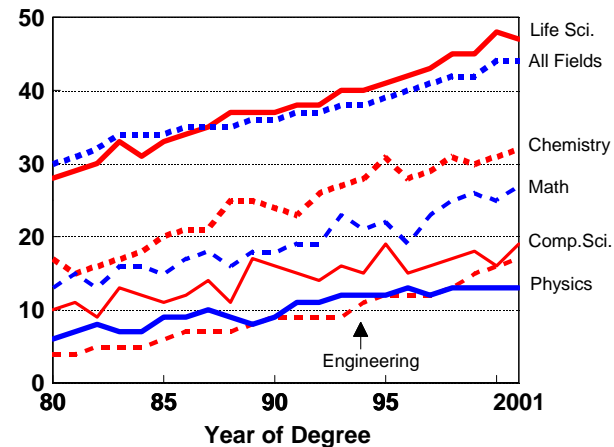
College Park, MD

May 7, 2007

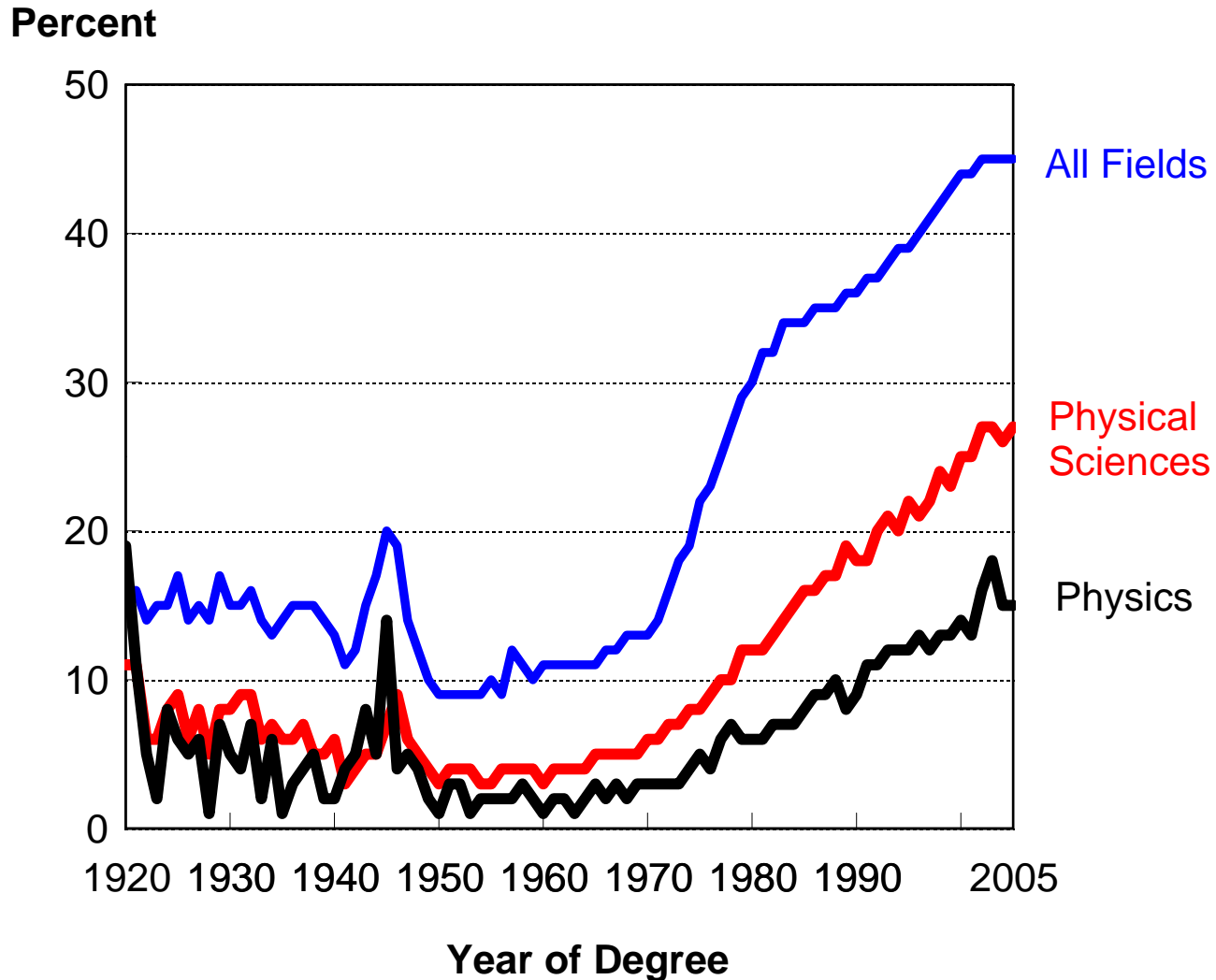
Percent of Bachelor's Degrees Earned by Women in Selected Fields, 1975 to 2000



Percent of PhDs Earned by Women in Selected Fields, 1980 to 2001

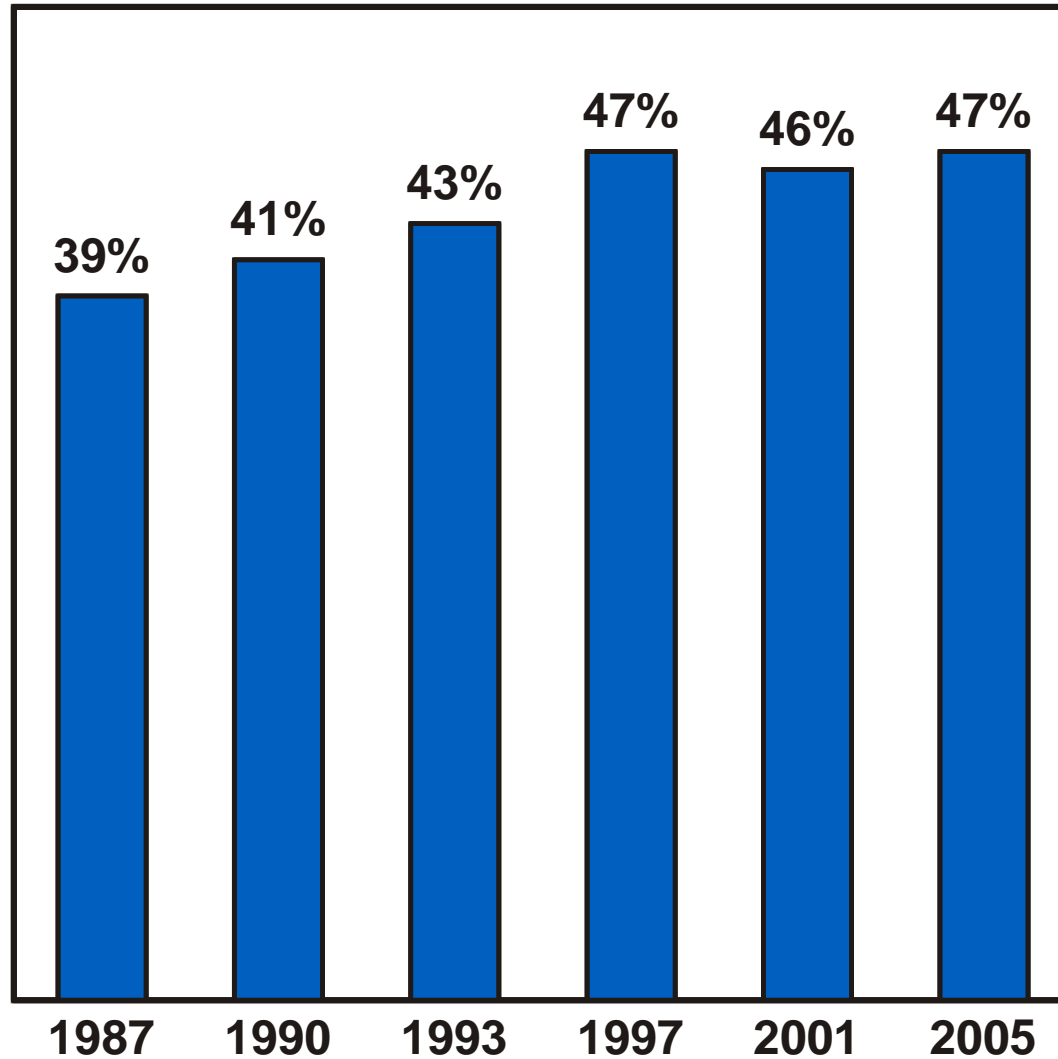


Percent of PhDs awarded to women in selected fields, 1920-2005.



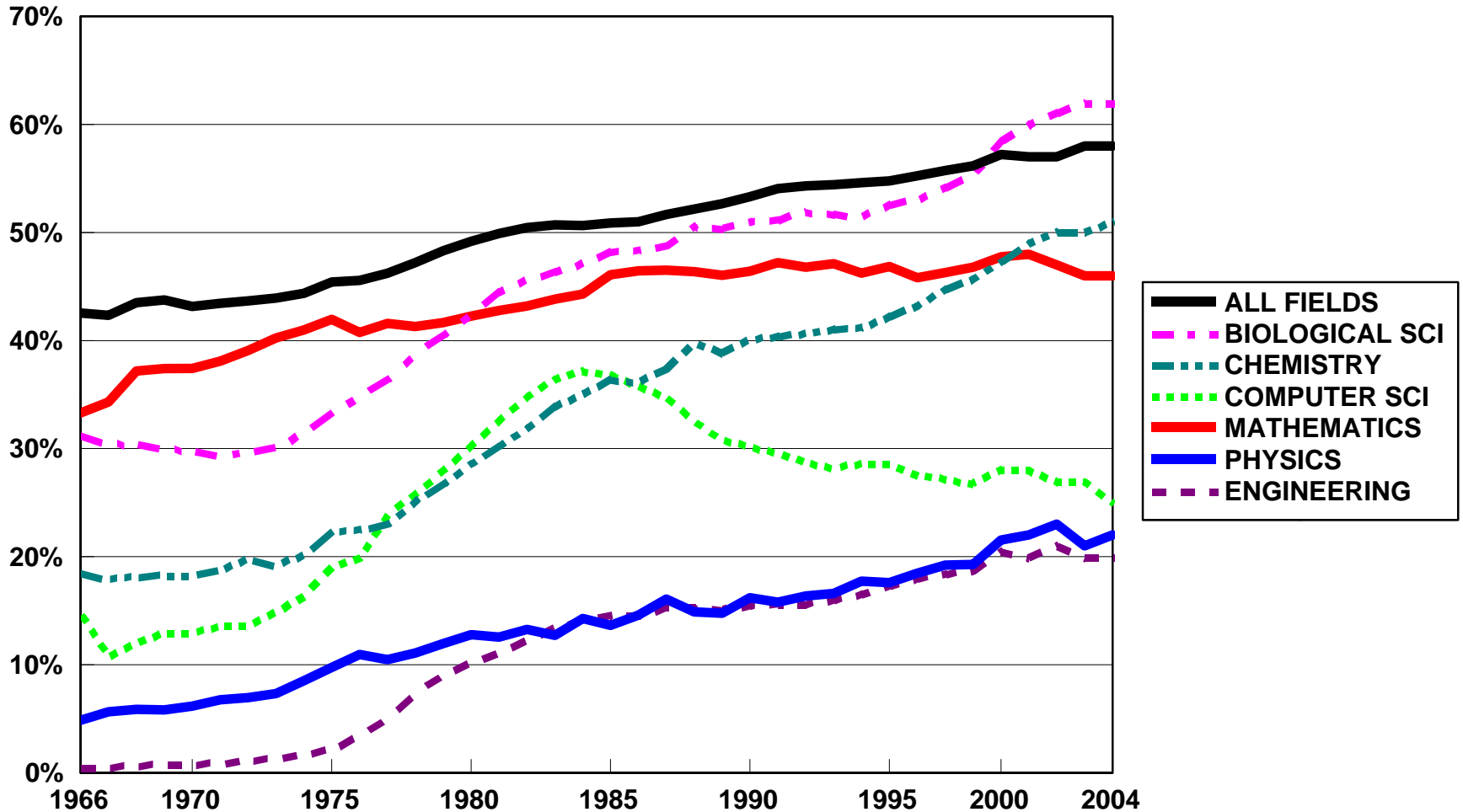
National Research Council, National Opinion Research Center , and National Science Foundation. Data compiled by AIP Statistical Research Center.

Girls as a percentage of high school physics students



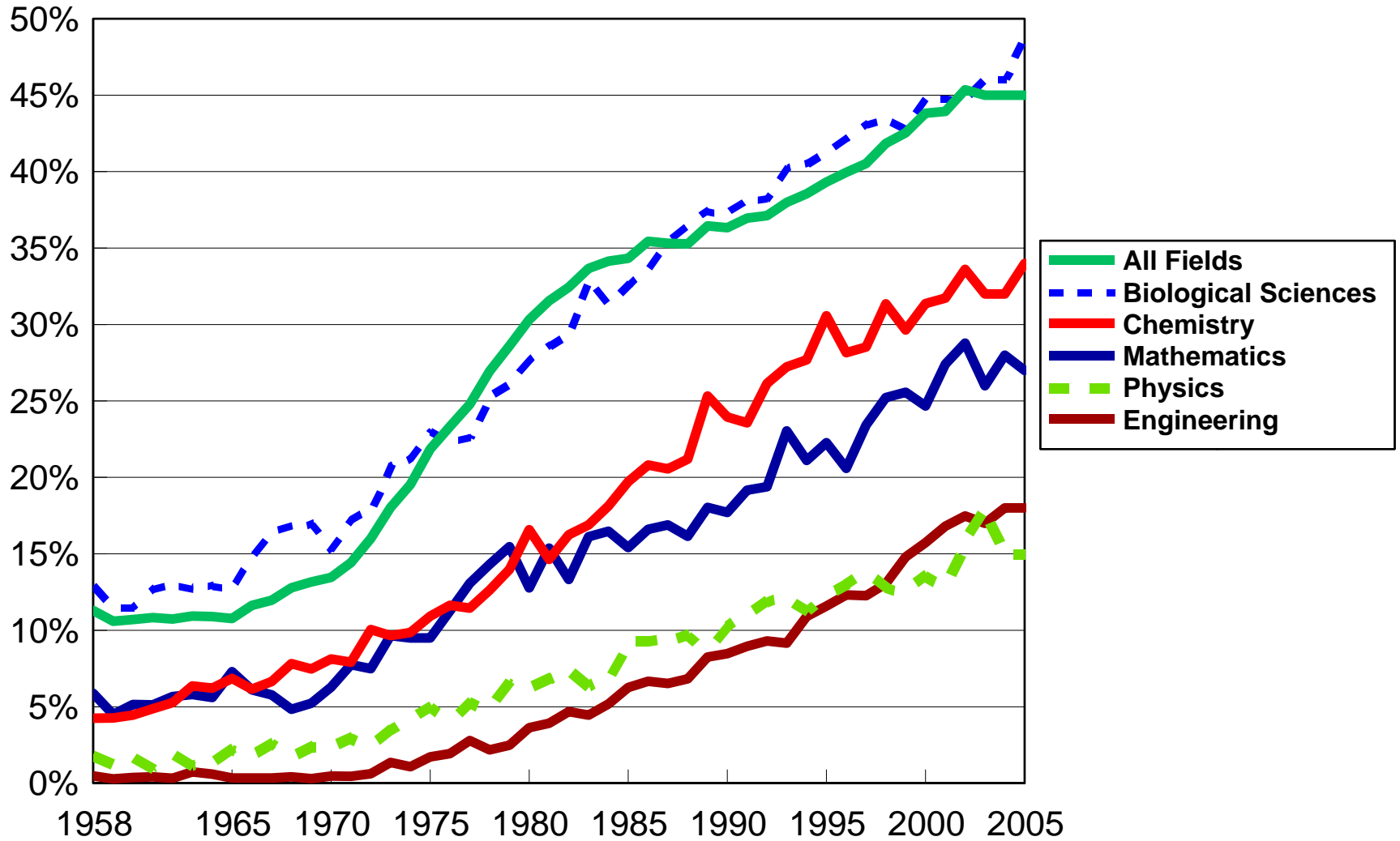
Source: AIP High School Physics Teacher Surveys

Percent of Bachelor's Degrees Earned by Women in Selected Fields, 1966-2004.



Source: National Center for Education Statistics. Data for Academic Year 1999 were not available.
Compiled by AIP Statistical Research Center.

Percent of PhDs earned by women in selected fields, 1958-2005



National Science Foundation. Data compiled by AIP Statistical Research Center.

Teachers and Faculty (2005-2006)

31% of high school physics teachers are women.

17% of astronomy faculty are women.

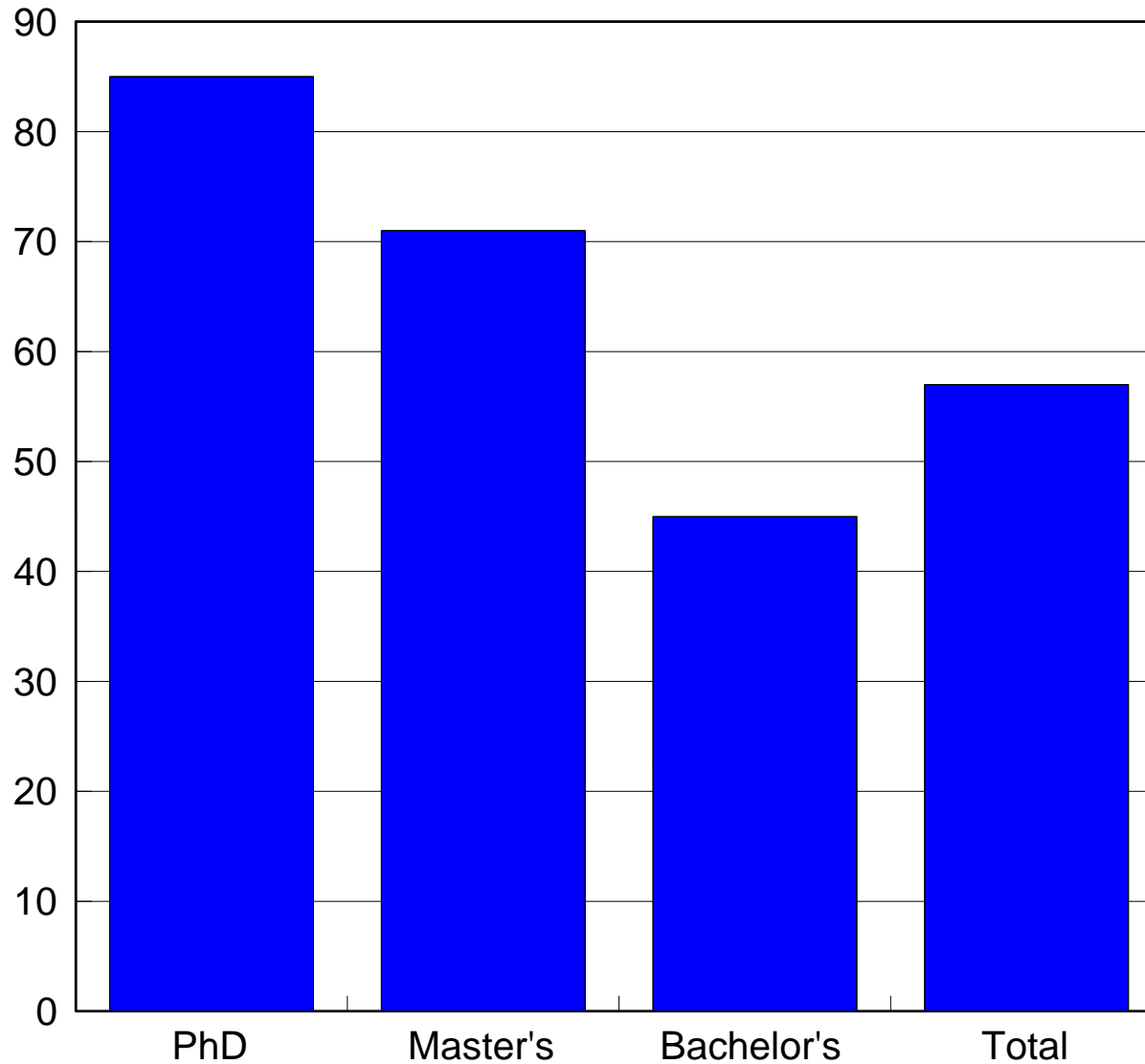
13% of physics faculty are women.

11% of physics department chairs are women.

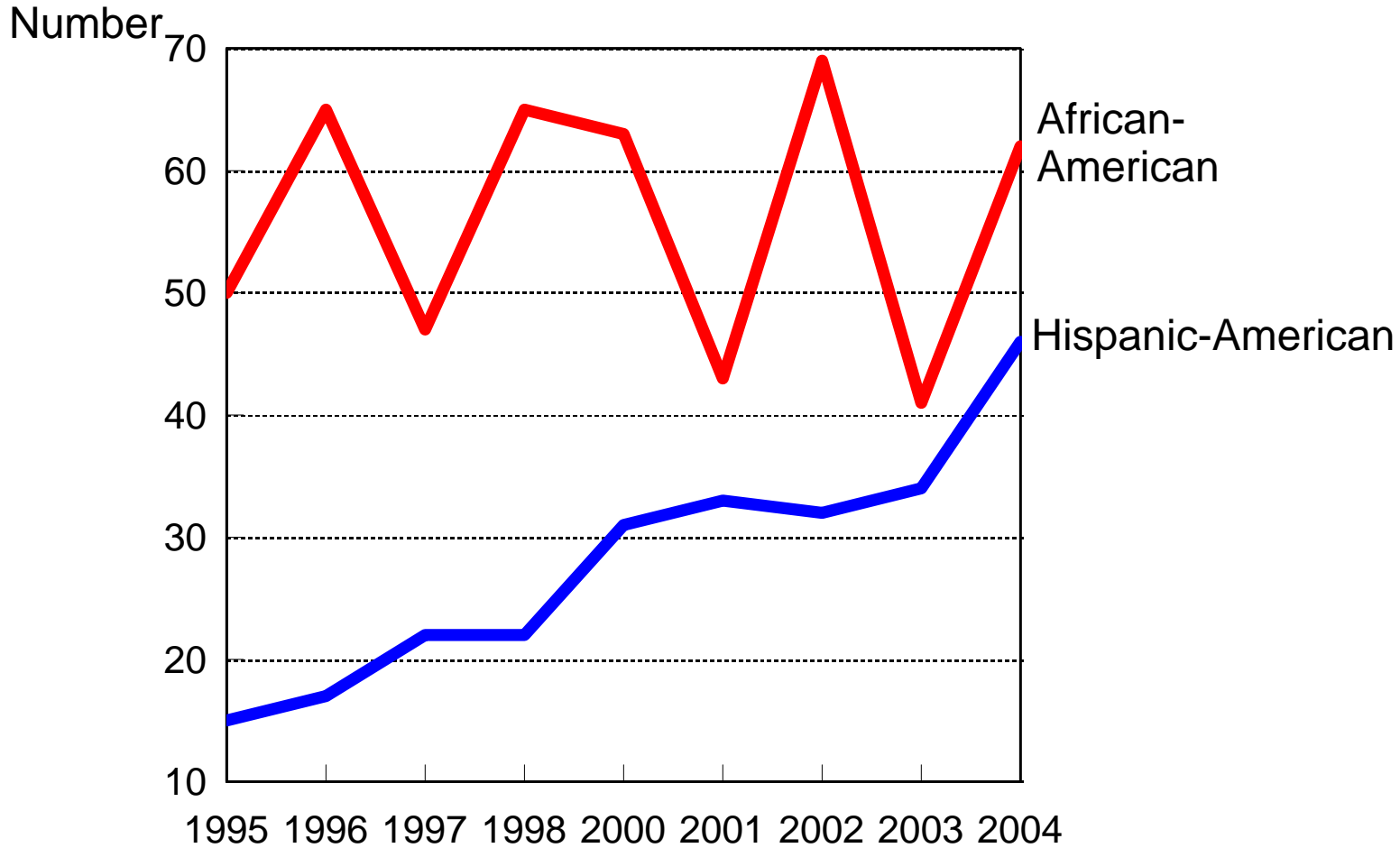
Percent of faculty positions in physics held by women.

	1998	2002	2006
Academic Rank			
Full Professor	3	5	6
Associate Prof.	10	11	14
Assistant Prof.	17	16	17
Instructor/Adjunct	N/A	16	19
Other ranks	13	15	12
Type of Department			
PhD	6	7	10
Master's	9	13	16
Bachelor's	11	14	19
OVERALL	8	10	13

Percent of physics departments with women faculty in professorial ranks, 2006



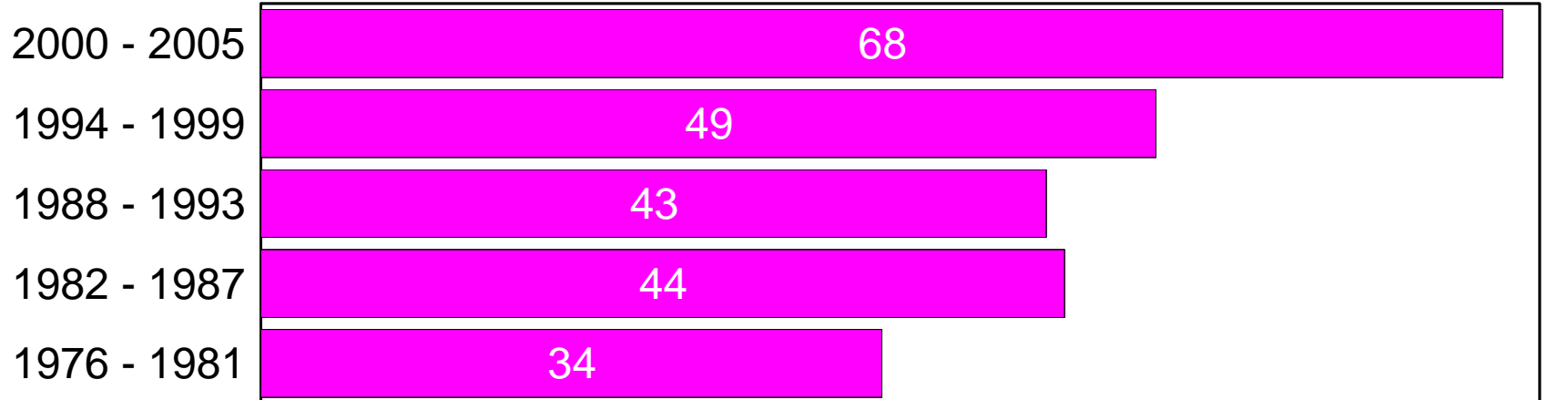
Hispanic and African-American women receiving physics bachelor's degrees



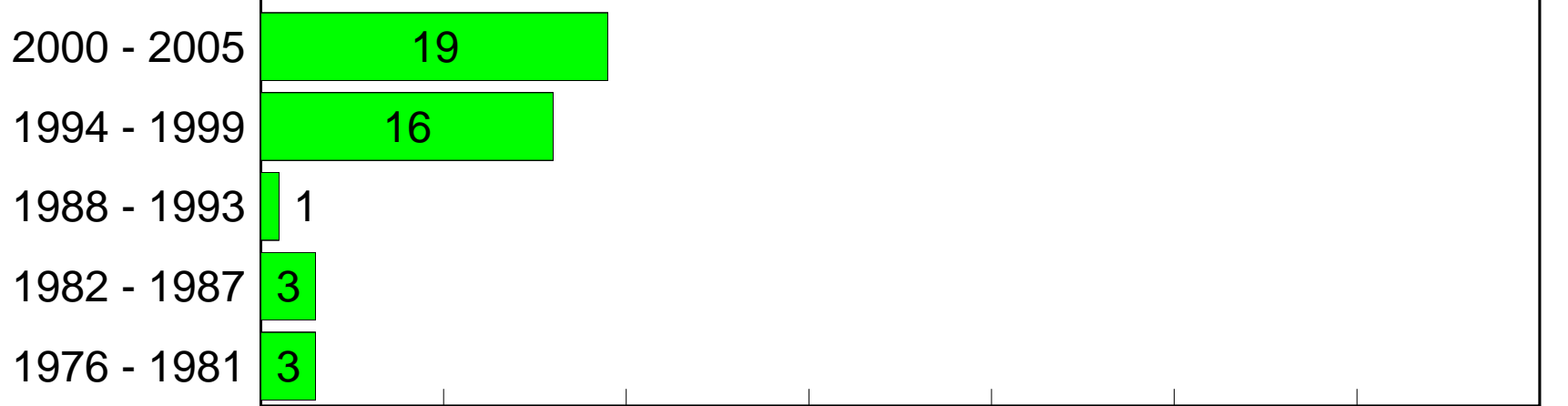
National Center for Education Statistics. Data for academic year 1999 not available. Compiled by AIP Statistical Research Center.

Number of Physics PhDs earned by African American Males and Females, 1976-2005.

Males



Females



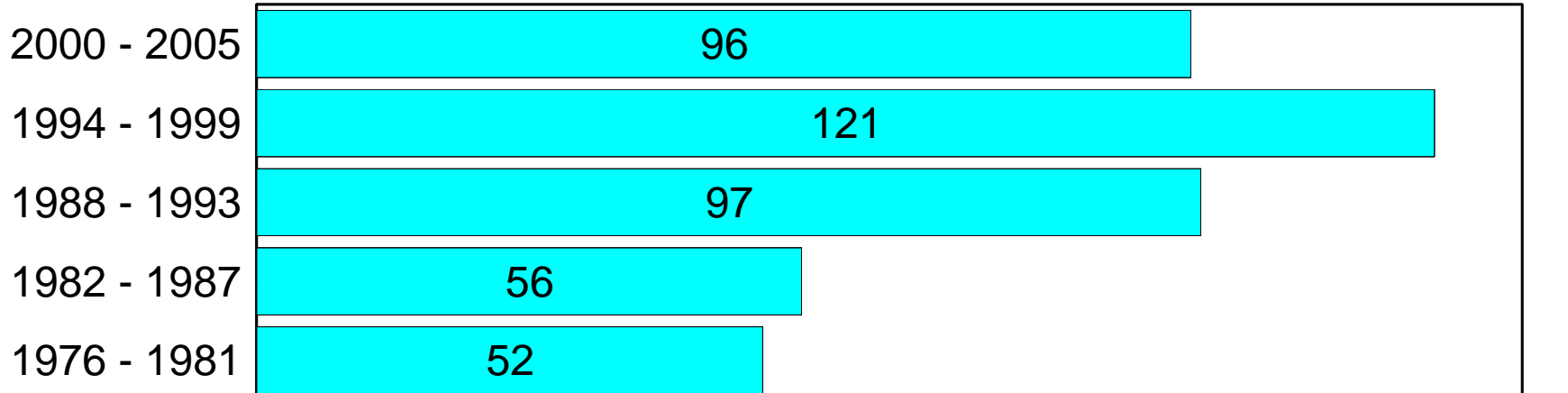
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Number of PhDs

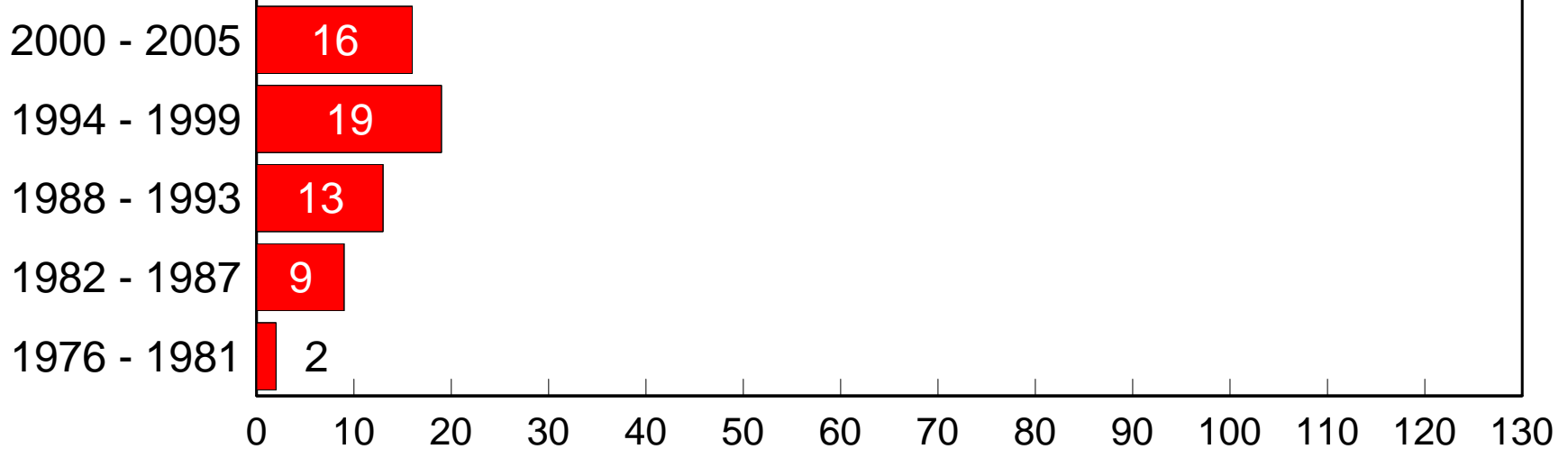
Source: AIP Statistical Research Center analyzed data collected by the National Science Foundation.

Number of Physics PhDs earned by Hispanic American Males and Females, 1976-2005.

Males



Females



Number of PhDs

Source: AIP Statistical Research Center analyzed data collected by the National Science Foundation.

Summers Remarks on Women



- **Harvard President Summers Remarks on Women**
 - At an invitation-only conference at the National Bureau of Economic Research on Friday, January 14, 2005, Harvard President Lawrence Summers spawned a debate on the causes of the under representation of women in science and engineering careers. As a luncheon speaker at the “Diversifying the Science & Engineering Workforce: Women, Under-represented Minorities, and their S&E Careers” conference, Dr. Summers suggested that "innate differences" may account for the gender-gap.
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- This topic has received extensive coverage in print, radio, and television media.
 - Public Discussion of the Issue is Good
 - Result of Discussion has increased public interest and support

Percentages of Physics Degrees Awarded to Women in Selected Countries, 1997 and 1998 (2-year averages).

Country	Ph.D.'s %	First-Level %
France	27	33
Poland	23	36
Norway	23	20
Ukraine	23	—
Australia	22	20
Turkey	21	37
India	20	32
Columbia	—	28
Denmark	17	19
Lithuania	17	—
United Kingdom	16	20
China-Taipei	13	19
United States	13	18
Sweden	13	17
Canada	12	22
Mexico	10	18
Germany	9	10
Switzerland	9	9
The Netherlands	9	5
South Korea	8	30
Japan	8	13

Source: 2001 International Study of Women in Physics, Statistical Research Center of the American Institute of Physics

Strategies

- Recruitment and hiring-

- Guidance from size of pool
- Women and men need to play active role
- Broaden Topical area of search
- Pay attention to 2-body problem

- Retention and Promotion

- Mentoring, networking is key
- Establishing effective policies
- Follow best practices for personal support