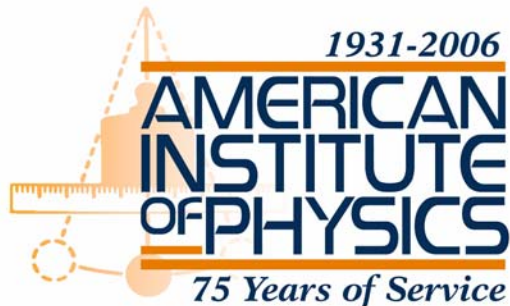


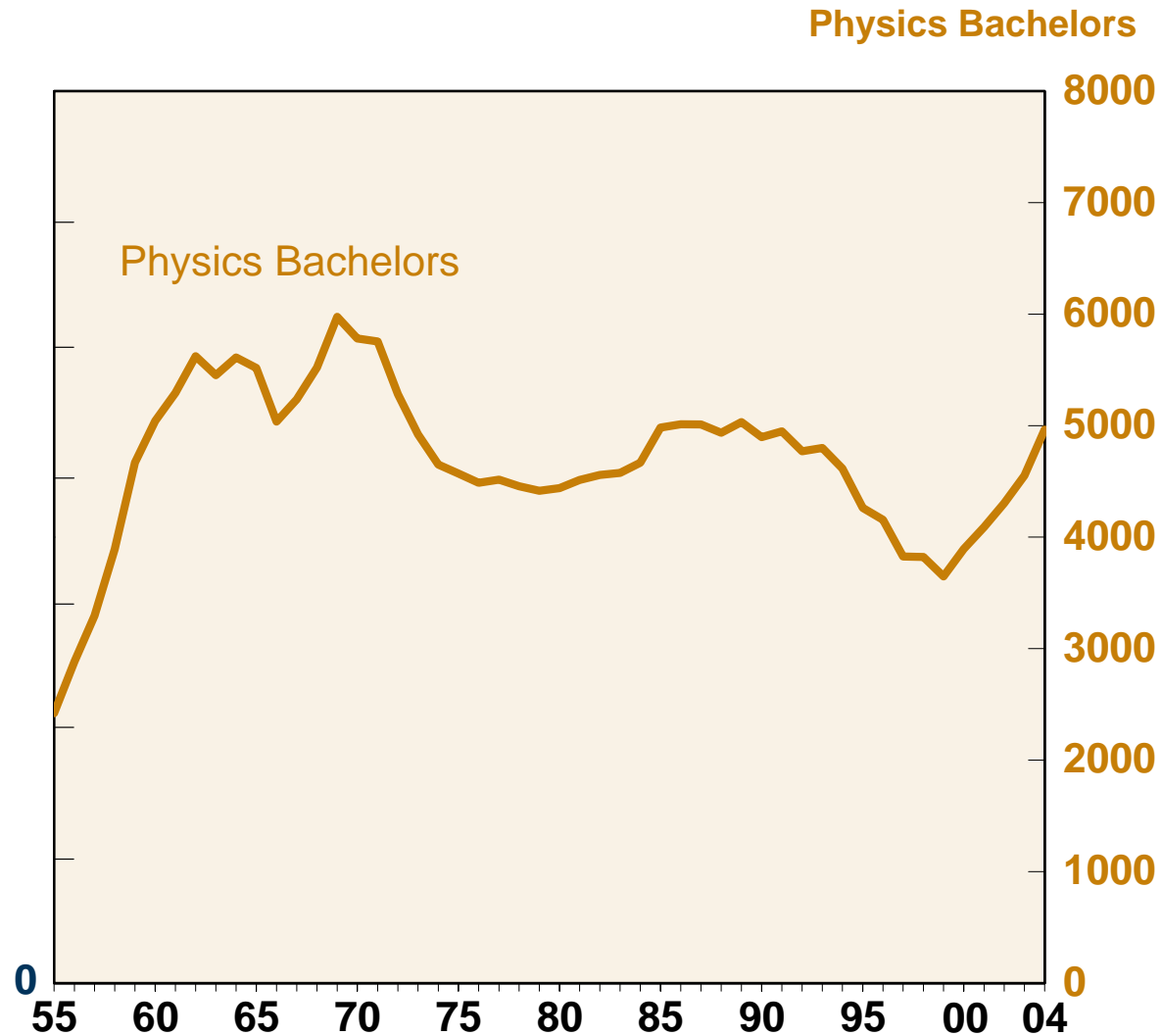
Changes in graduate enrollment, composition, and subsequent jobs

2006 APS March Meeting



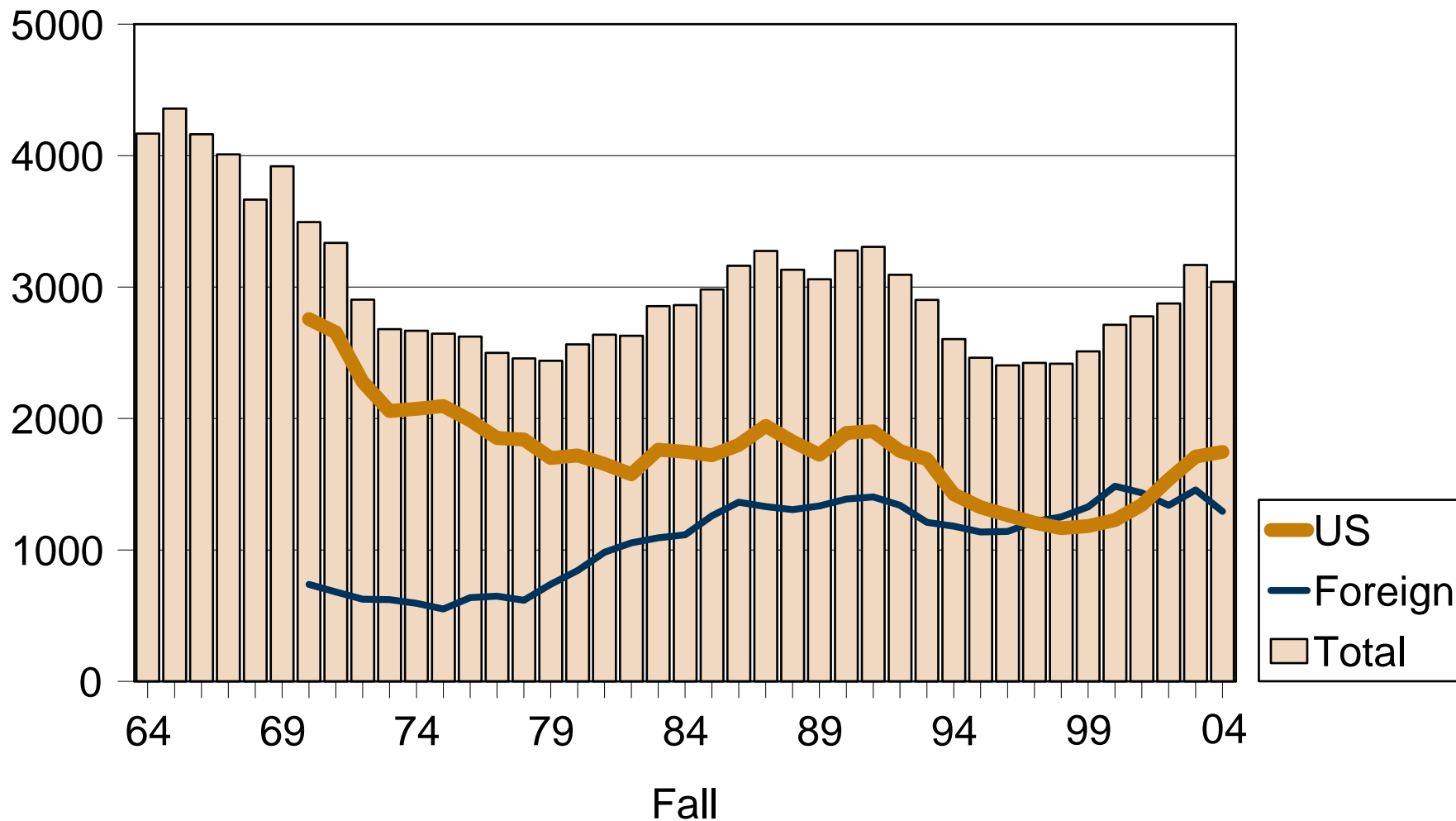
Patrick Mulvey
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American Institute of Physics
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www.aip.org/statistics

Physics bachelor's produced in the US, 1955 to 2004.



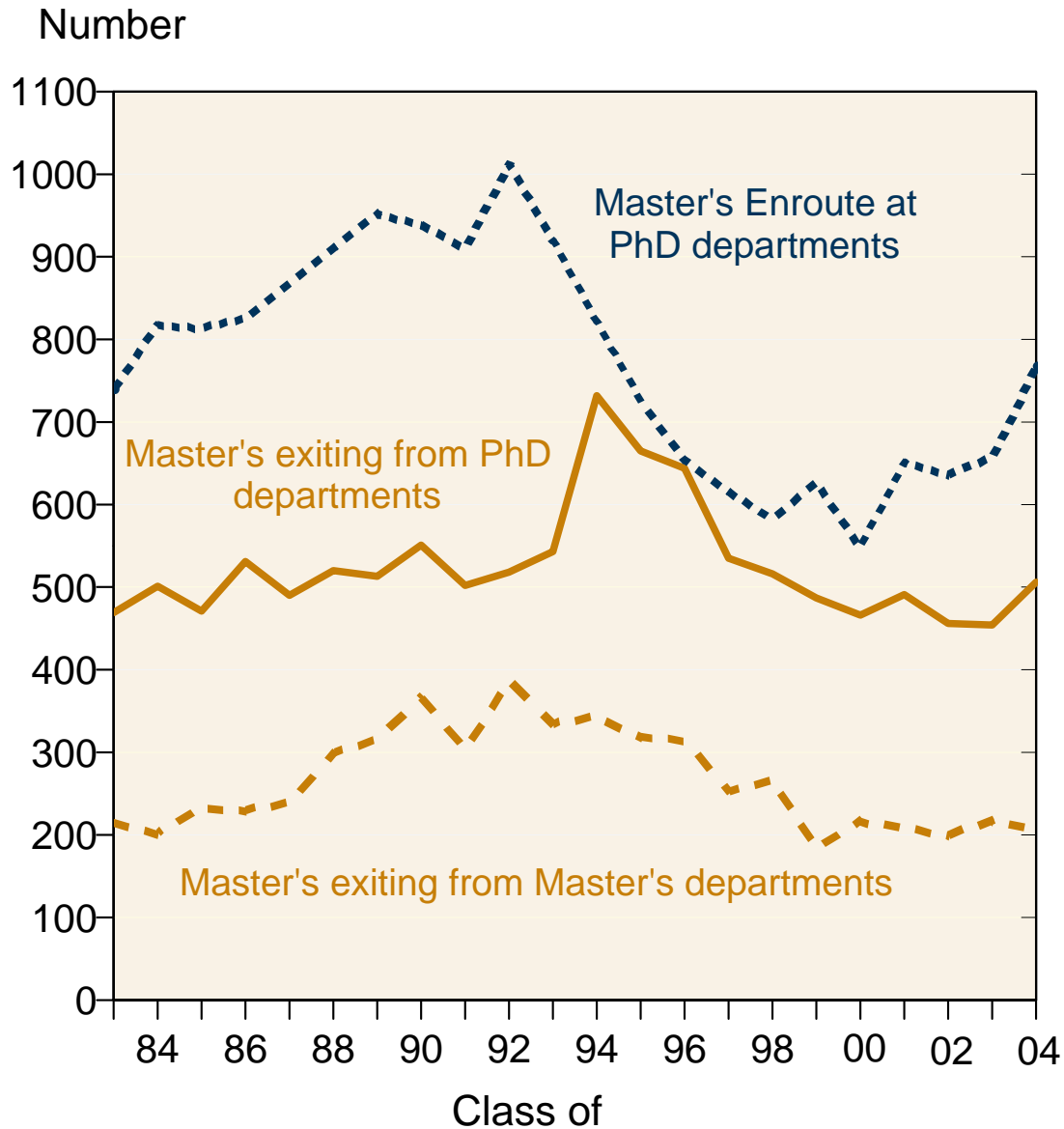
AIP Statistical Research Center, Enrollments and Degrees Survey

First-year US and foreign graduate physics students, fall 1964 to fall 2004.

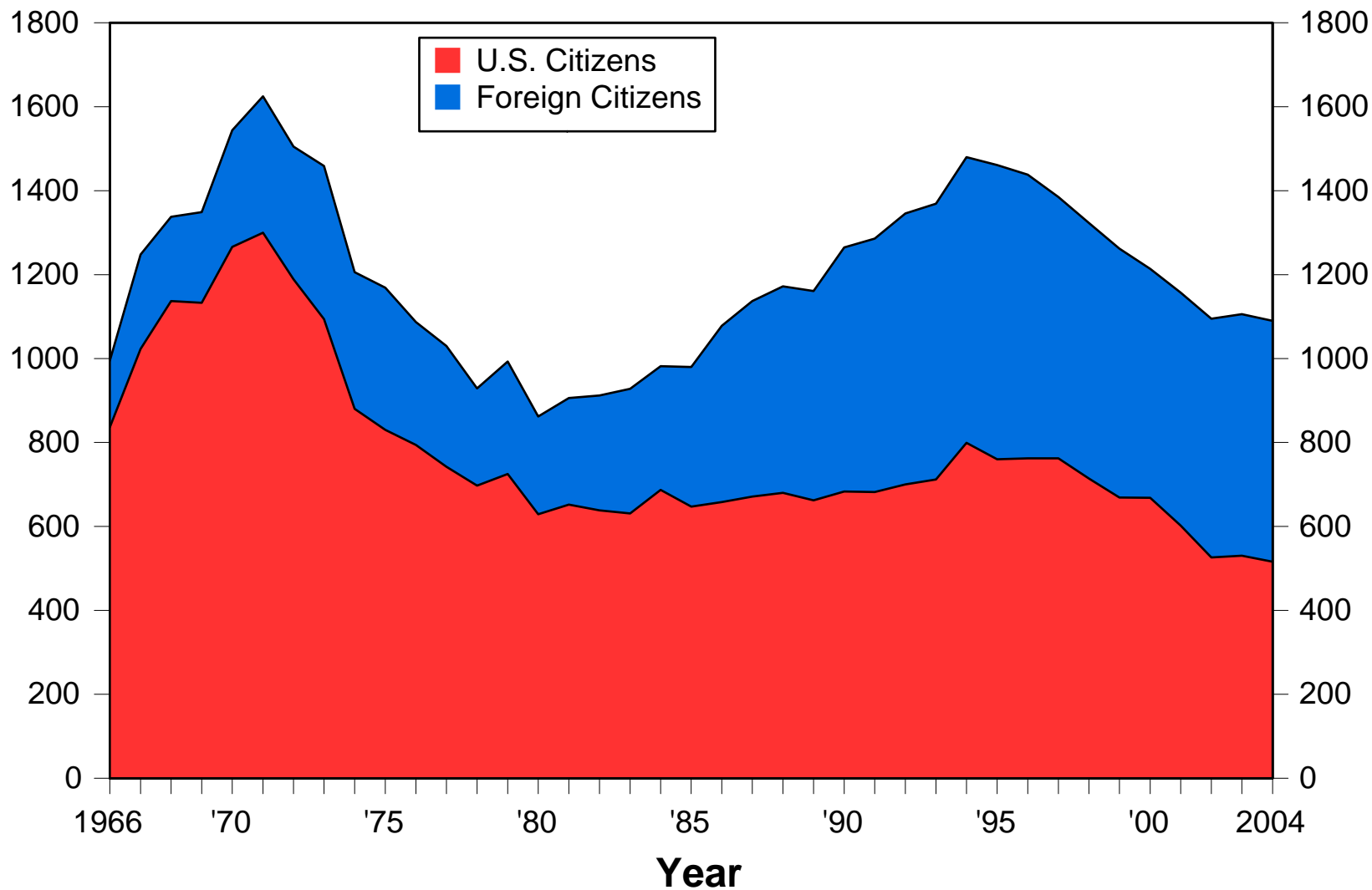


Source: AIP Statistical Research Center, Enrollments and Degrees Survey

Master's degrees conferred by type of degree and department, 1983-2004.

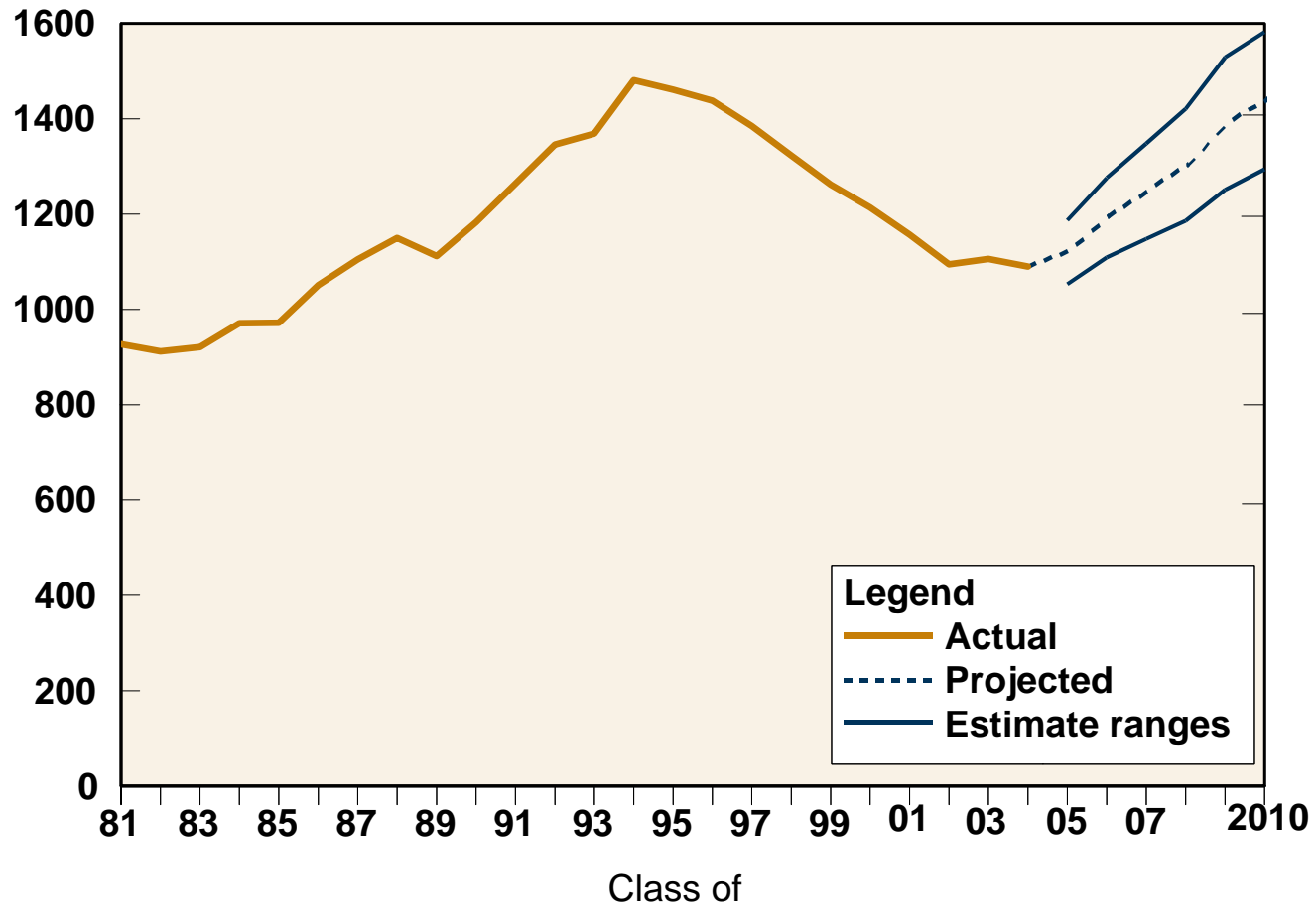


Number of physics PhD recipients by citizenship, 1966-2004.



Sources: NSF (1966-1991), AIP (1992-2004)
Compiled by: AIP Statistical Research Center.

Projections for the number of PhD's in the classes of 2005 through 2010.



**Region & countries of citizenship of
foreign first-year physics and astronomy
graduate students.**

	1999	2004
	%	%
<u>Asia</u>	47	63
People's Republic of China	26	33
India	6	12
South Korea	5	5
Pakistan	<1	5
Other Asia	10	8
 <u>Europe</u>	 36	 21
Eastern	21	11
Western	15	10
 <u>Americas</u>	 7	 9
Mexico, South and Central America	4	6
Canada	3	3
 <u>Middle East</u>	 7	 5
 <u>Africa</u>	 2	 2
 <u>Australia, New Zealand</u>	 1	 0

Primary type of financial support and proportion receiving tuition waivers for first-year physics and astronomy graduate students, 2003 - 2004.

	Highest Degree of Department		Citizenship		Overall %
	PhD %	MS %	US %	Foreign %	
Type of support					
Teaching Assistantship	64	67	58	69	64
Research Assistantship	16	20	16	16	16
Fellowship	18	3	21	12	17
Self-funded*	1	8	4	1	2
Other	1	2	1	2	1
Type of tuition waiver					
Full	88	65	89	84	87
Partial	8	19	6	12	9
None	4	16	5	4	4

*Self-financed includes savings, loans, and non-departmental employment.

Table is limited to full-time students.

AIP Statistical Research Center, Graduate Student Report.

Annual stipend amount and hours of service per week for first-year physics and astronomy graduate students*, 2003 - 2004.

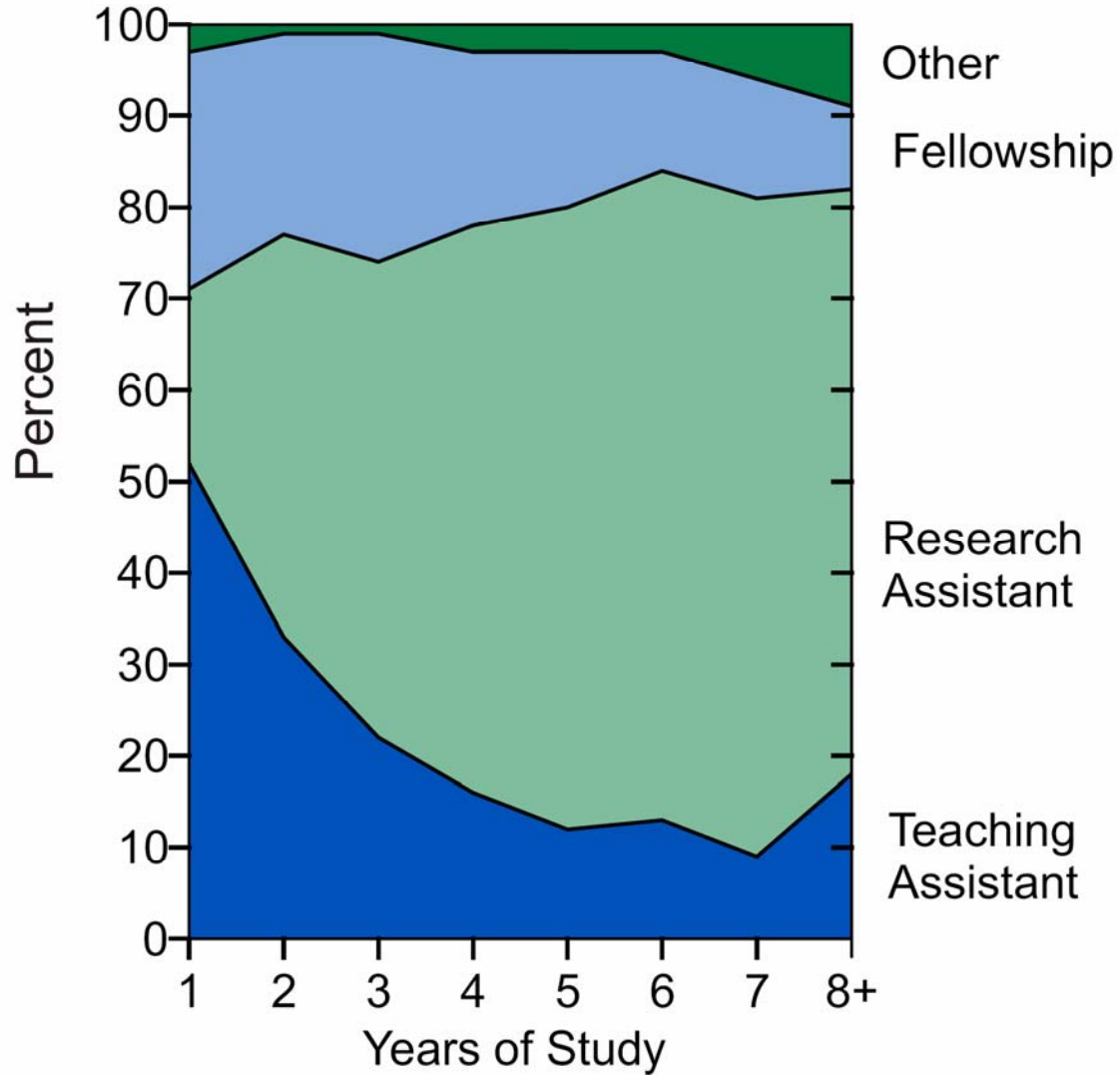
	Teaching Assistantship	Research Assistanship	Fellowship
Median Stipend	\$14,500	\$15,900	\$18,000
Hours of service	%	%	%
20	65	79	-
15	18	11	-
10	17	10	-

* Limited to full-time students in PhD programs

AIP Statistical Research Center, Graduate Student Report.

Primary Source of Support for Physics Doctoral Students.

US Citizens Only



Source: Graduate Student Survey, 2000-2001

**Desired employment sector of first-year physics and astronomy graduate students,
2003 - 2004.**

Sector	Highest Anticipated Degree		Broad Discipline of Department		Overall
	MS %	PhD %	Physics %	Astronomy %	
University	10	62	54	76	56
2 or 4 Year College	10	6	6	12	7
Elementary or High School	8	1	1	0	1
Private Sector	43	17	21	2	20
FFRD&C* or National Labs	11	12	12	9	12
Medical, Hospital	9	2	3	0	2
Other	9	1	2	3	2

*FFRD&C Federally Funded Research and Development Center.

AIP Statistical Research Center, Graduate Student Report.

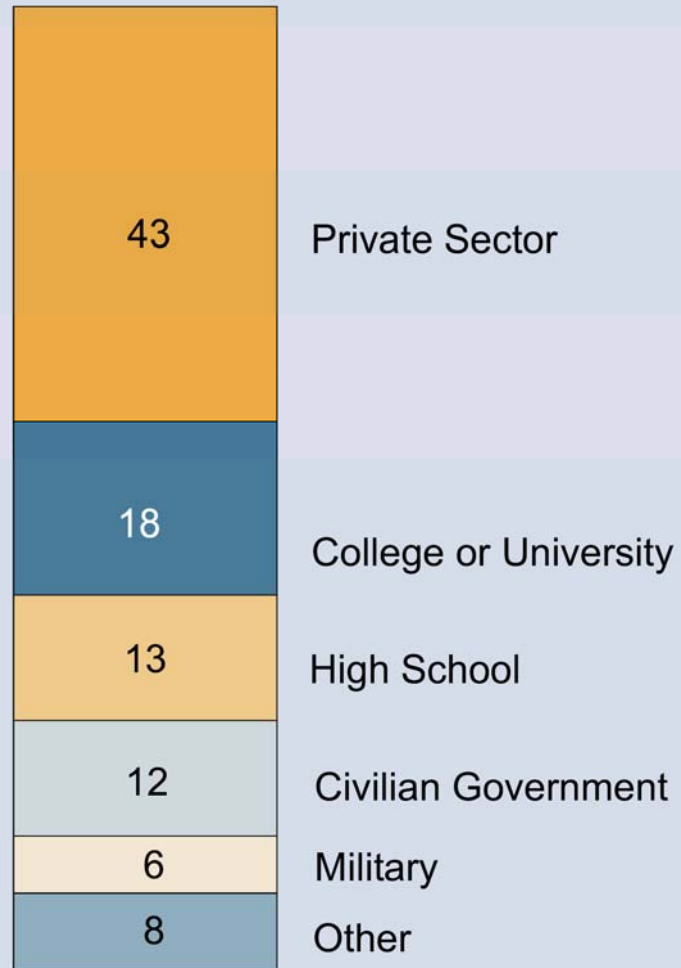
Initial outcomes of exiting physics masters by citizenship, classes of 2002 & 2003.

	US Citizens %	Foreign Citizens %
Graduate study in Physics or Astronomy	17	54
Graduate study in other fields	9	26
Employment	68	16
Unemployed	6	4

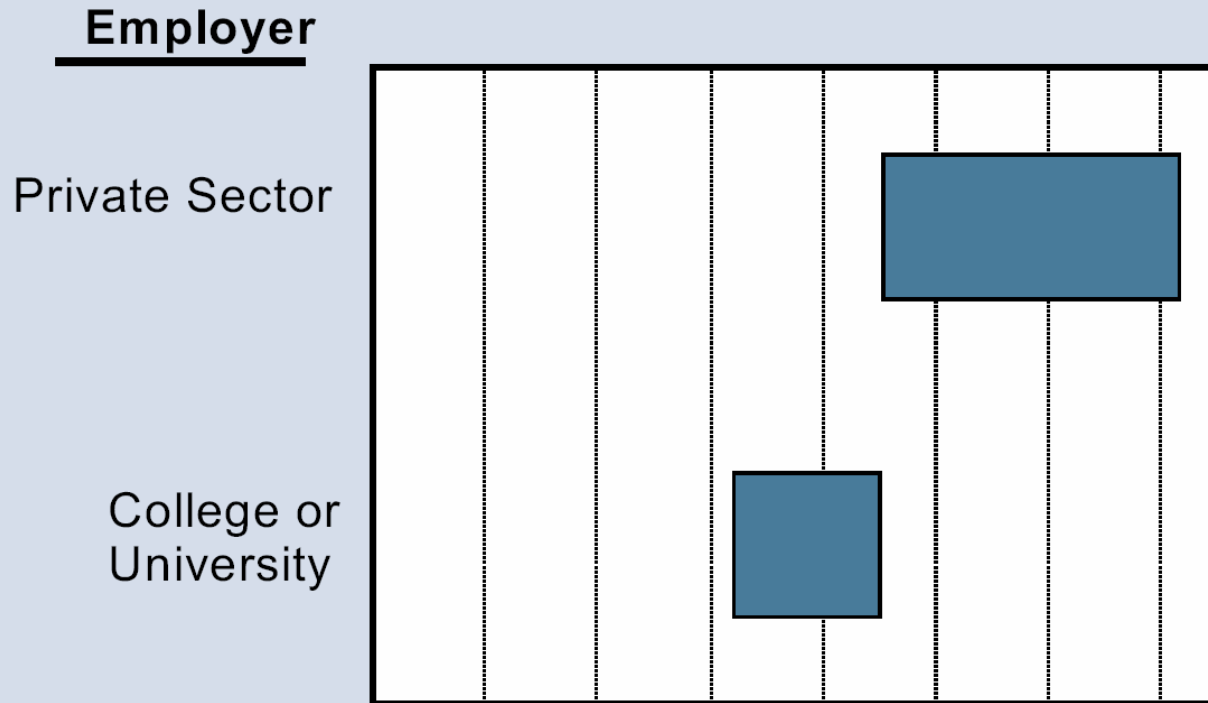
* At a different department from their master's-granting department.

AIP Statistical Research Center, Initial Employment Report.

Employer distribution of full-time employed physics masters, classes of 2002 & 2003.

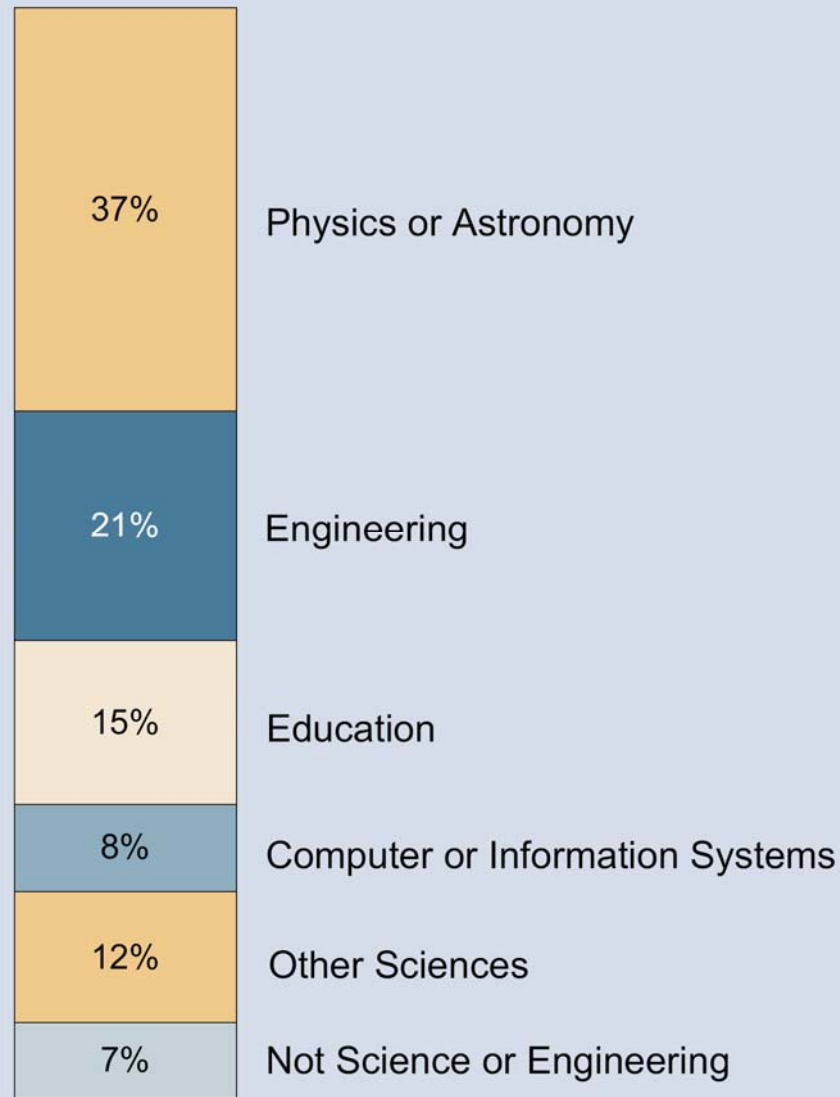


Typical range of starting salaries for physics masters, classes of 2002 & 2003.

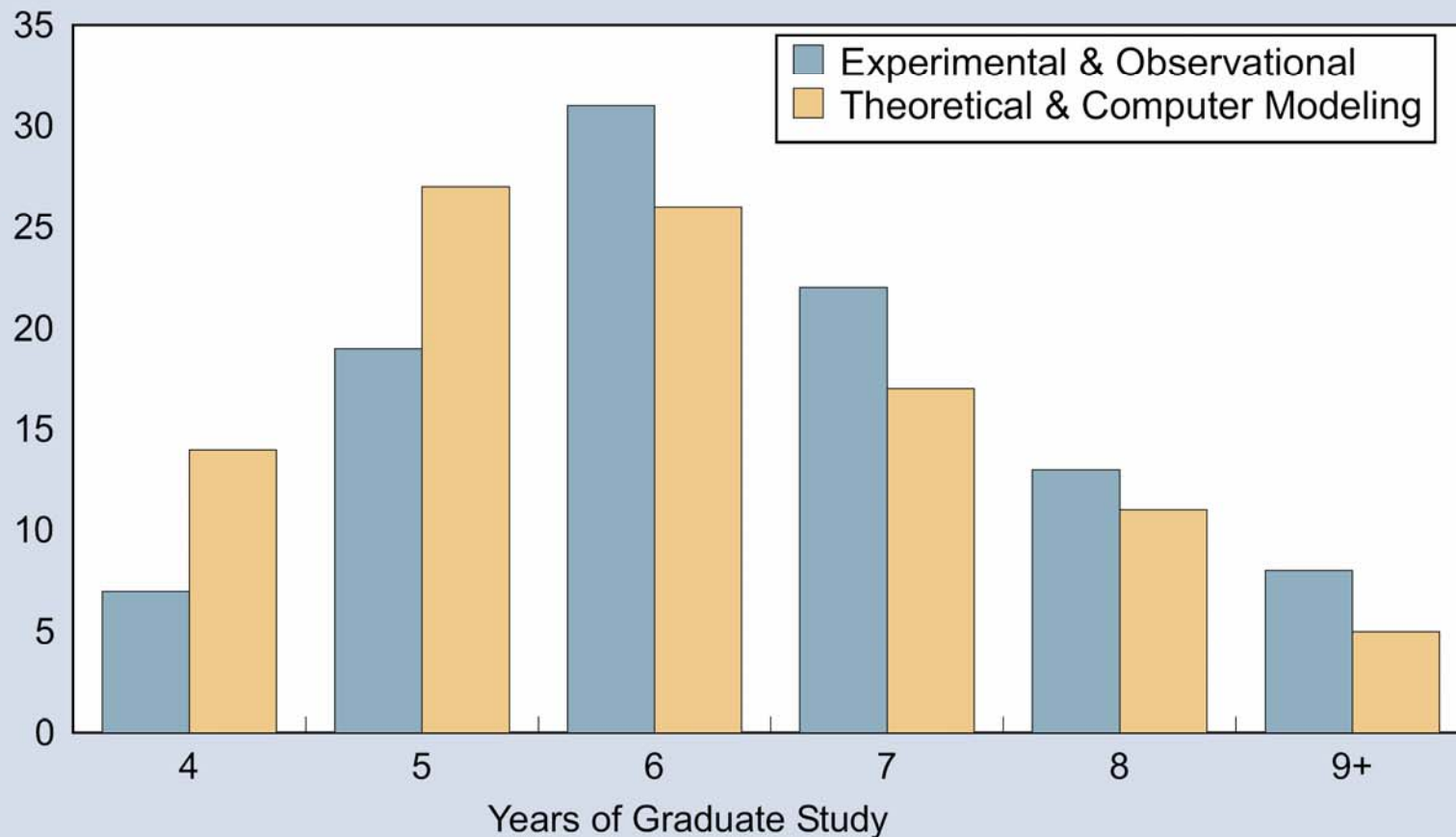


AIP Statistical Research Center, Initial Employment Report.

Field of employment for physics masters, classes of 2002 & 2003.

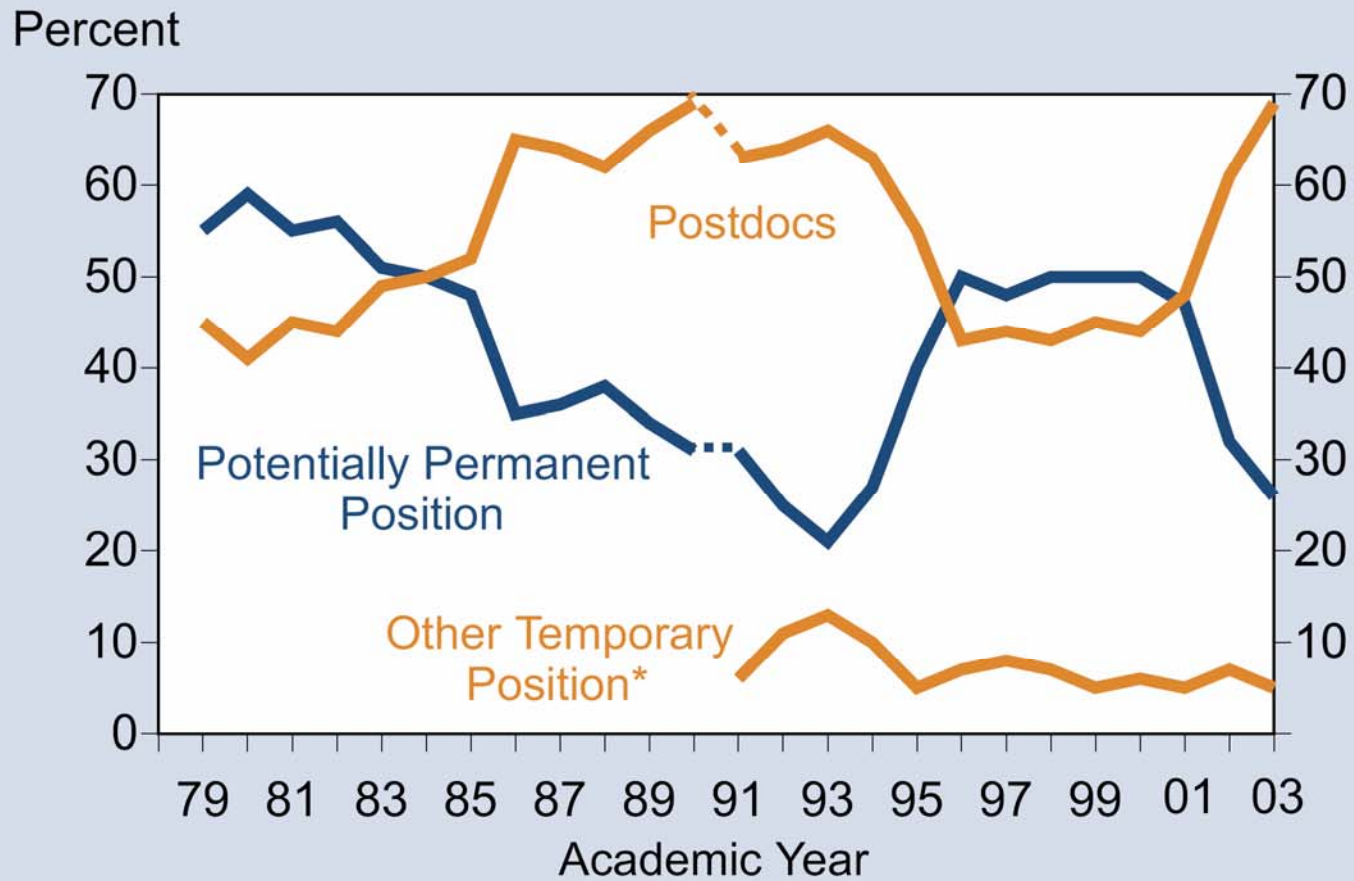


Full-time equivalent years of study completed for physics PhDs* by type of research, classes of 2002 & 2003.



* US Citizens Only

Initial employment of physics PhDs, 1979-2003.



*In 1991, the survey questionnaire was changed to measure "other temporary" employment as a separate category.

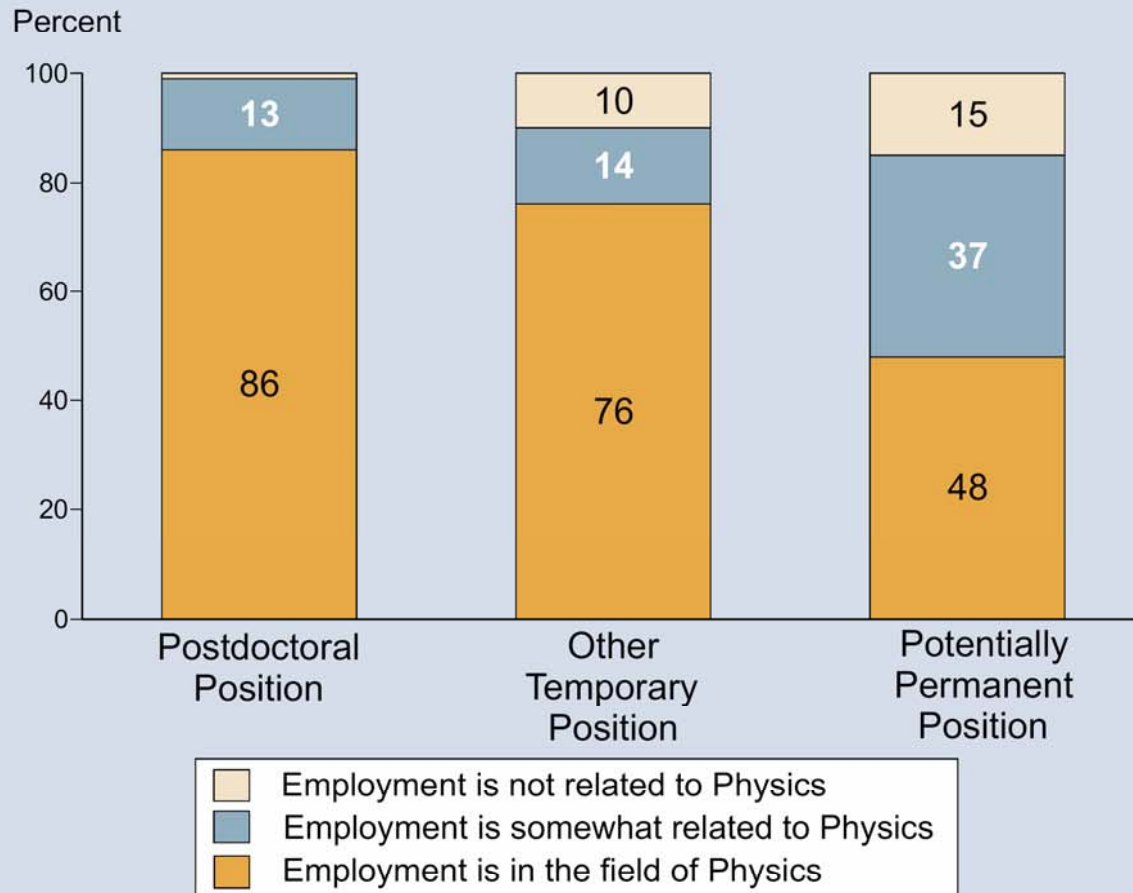
**Initial employment sectors of physics PhDs by type of position accepted,
classes of 2002 & 2003.**

	Potentially Permanent %	Postdoc %	Other Temporary %	Overall %
Academic*	27	72	78	60
Private Sector	50	2	5	16
Government	19	25	5	22
Nonprofit	2	1	2	1
Other	2	0	10	1

* Includes University Affiliated Research Centers

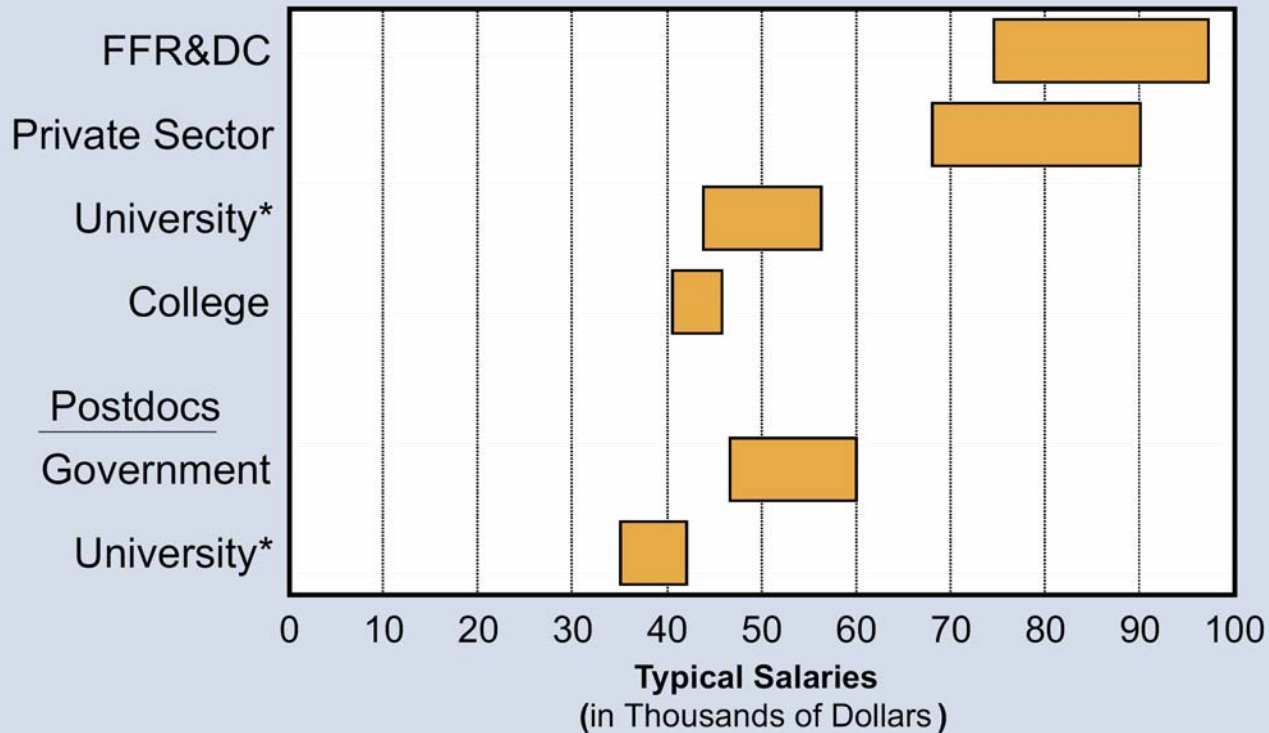
AIP Statistical Research Center, Initial Employment Report.

Initial employment of physics PhDs by field and type of position secured, classes of 2002 & 2003.



Typical range of starting salaries for physics PhDs, classes of 2002 & 2003.

Potentially
Permanent



Typical salaries are the middle 50%, i.e., between the 25th and 75th percentiles.
FFR&DC: Federally Funded Research and Development Center, e.g. Los Alamos.
*University includes University Affiliated Research Institutes.

Career goals of physics PhDs, classes of 2002 & 2003.

Type of Potentially Permanent Position	Desired Sector					
	University* %	2 or 4 Yr College %	Private Sector %	Civilian Gov't. (incl. FFR&DC) %	Other %	Total %
Primarily in the field of physics	35	14	28	19	4	100
Somewhat related to physics	16	9	54	12	9	100
In other science fields	3	3	82	6	6	100
Type of Temporary Position						
Postdoctoral	63	5	15	15	2	100
Other temporary position	47	25	12	8	8	100

FFR&DC: Federally Funded Research and Development Center, e.g. Los Alamos

*Includes University Affiliated Research Institutes.

AIP Statistical Research Center, Initial Employment Report.