

## Number of Physics and Astronomy Faculty

### Highlights

- Data for these graphs were collected from a survey sent to all physics and astronomy degree-granting departments in the US in 2006. The response rate to the survey was 96%. AIP thanks all the departments for completing the survey.
- Between 1996 and 2006, departments that offer bachelors as their highest physics degree increased their number of FTE faculty positions from 2600 to 2900. Departments that offer PhDs in physics now have an estimated 5400 FTE faculty positions, up from 5000 in 1996 (**Table 1**).
- Departments that offer physics master's degrees have an estimated 850 FTE faculty positions, which is unchanged since 1996. However, there are now 14 fewer departments that offer master's degrees as their highest physics degree. Consequently, the average number of FTE faculty positions in master's departments increased from 11 in 1996 to 13 in 2006 (**Table 1**).
- In 2006, there were 510 departments that granted only bachelor's degrees in physics. Most of these departments are small in terms of number of faculty. In fact, the median number of FTE faculty positions at bachelors-only departments is four. Physics departments that grant PhDs tend to have many more faculty members, with a median number of 26 FTE faculty positions per department (**Table 2**).
- After several years of increases, the percentage of temporary and non-tenure-track FTE physics faculty positions has leveled off. Overall, 18% of FTE physics faculty members are temporary or non-tenure-track (**Table 3**).
- More than one-third of PhD physics departments awarded 40 or more bachelor's degrees during the three year period 2003-2005. Most of these departments have very large numbers of FTE faculty, usually more than 30 (**Table 4**).
- Compared to physics PhD departments, bachelor's departments tend to have smaller faculties and award fewer bachelor's degrees annually. However, they are very efficient at doing so. For example, there are 136 bachelor-only departments that awarded 16 or more bachelor's degrees during the 2003-2005 academic year. Of these, more than 80% have nine or fewer FTE faculty positions (**Table 5**). In comparison, there were 60 PhD-granting departments that awarded 19 or fewer bachelor's degrees during this period, and most of them had more than 15 FTE faculty positions (**Table 4**).
- There are a total of 38 stand-alone **astronomy** departments, compared to 764 physics departments (some of which are combined with astronomy). In 2006, the stand-alone astronomy departments had approximately 580 FTE faculty members. Most astronomers and astrophysicists in academia are employed by physics departments. Physics departments reported that they employed 1020 faculty members who specialized in astronomy or astrophysics for their dissertation research. That is almost double the number employed by astronomy departments (**Table 6**).

**Table 1. Estimated Number of Full-Time Equivalent Physics Faculty and Average Number of Faculty, 1996 and 2006**

			<b>1996</b>	<b>2006</b>	
<b>Highest Physics Degree Offered in Department</b>	PhD	FTE	5000	5400	
		Average	27	29	
	Master's	FTE	850	850	
		Average	11	13	
	Bachelor's	FTE	2600	2900	
		Average	5	6	
	Overall	FTE	8450	9150	
		Average	11	13	
	AWF Statistical Research Center: 2006 AWF Survey				

**Table 2. Distribution of Physics Faculty by Department Type, 2006**

	Highest Degree Offered in Department		
	PhD	Master's	Bachelor's
Number of Departments	184	66	510
Median Number of Faculty	26	12	4
Number of Faculty in Smallest Third of Departments	4-20	3-10	0.5-3
Number of Faculty in Middle Third of Departments	20-34	10-14	3-6
Number of Faculty in Largest Third of Departments	34-79	14-29	6-37

AIP Statistical Research Center: 2006 AWF Survey

**Table 3. Percent of Full-Time Equivalent Physics Faculty Who Were Temporary or Non-Tenure-Track, 2000-2006.**

		<b>2000</b>	<b>2002</b>	<b>2004</b>	<b>2006</b>
		<b>(%)</b>	<b>(%)</b>	<b>(%)</b>	<b>(%)</b>
<b>Highest Degree offered by Department</b>	PhD	11	14	18	15
	Master's	16	19	19	20
	Bachelor's	19	22	21	22
	Overall	14	17	19	18

AWF Statistical Research Center: 2006 AWF Survey

**Table 4. Number of PhD-Granting Departments by Number of Full-Time Equivalent (FTE) Faculty and by Cumulative Number of Bachelor's Awarded, 2003-2005**

		<b>Cumulative number of bachelor's awarded 2003-2005</b>					
		<b>9 or less</b>	<b>10-19</b>	<b>20-29</b>	<b>30-39</b>	<b>40 or more</b>	<b>Overall</b>
<b>Number of FTE faculty</b>	15 or less	1	14	5	1	7	28
	15.1 - 30	7	31	15	7	15	75
	30.1-45	3	4	10	7	20	44
	45.1-more	0	0	3	5	22	30
	Overall	11	49	33	20	64	177

AIP Statistical Research Center: 2006 AWF Survey and Enrollments and Degrees

**Table 5. Number of Bachelor's-Granting Departments by Number of Full-Time Equivalent (FTE) Faculty and by Cumulative Number of Bachelor's Awarded 2003-2005**

		Cumulative number of bachelor's awarded 2003-2005					
		None	1 - 5	6 - 10	11- 15	16 or more	Overall
Number of FTE faculty	3 or less	11	76	43	26	12	168
	3.1 - 6	3	46	48	32	47	176
	6.1 - 9	2	12	19	14	53	100
	9.1 - more	0	9	8	17	24	58
	Overall	16	143	118	89	136	502

AIP Statistical Research Center: 2006 AWF Survey, and Enrollments and Degrees

**Table 6. Characteristics of Physics and Astronomy Departments, 2005-06**

	Stand-alone Astronomy	Physics
<b>Total Departments</b>	38	764
<b>Highest Degree Offered at Department</b>		
PhD	29	185
Master's	2	66
Bachelor's	7	513
<b># of Faculty Members</b>	580	9400

AIP Statistical Research Center: 2006 AWF Survey