TABLE 1.

5-year trends (% per year) computed from least-squares fit to data in Fig. 1.

	APPLY	ADMIT	ENTER
Combined	**- 8.7 %**	**- 1.3%**	**- 3.2%**
3 *largest* schools	- 4.1 %	+ 0.5 %	+ 1.3 %
6 *large* schools	- 8.2 %	- 0.8 %	- 6.1 %
8 *medium* schools	- 13.4 %	- 6.9 %	- 8.1 %
19 *small* schools	- 4.6 %	+ 4.5 %	+ 3.0 %

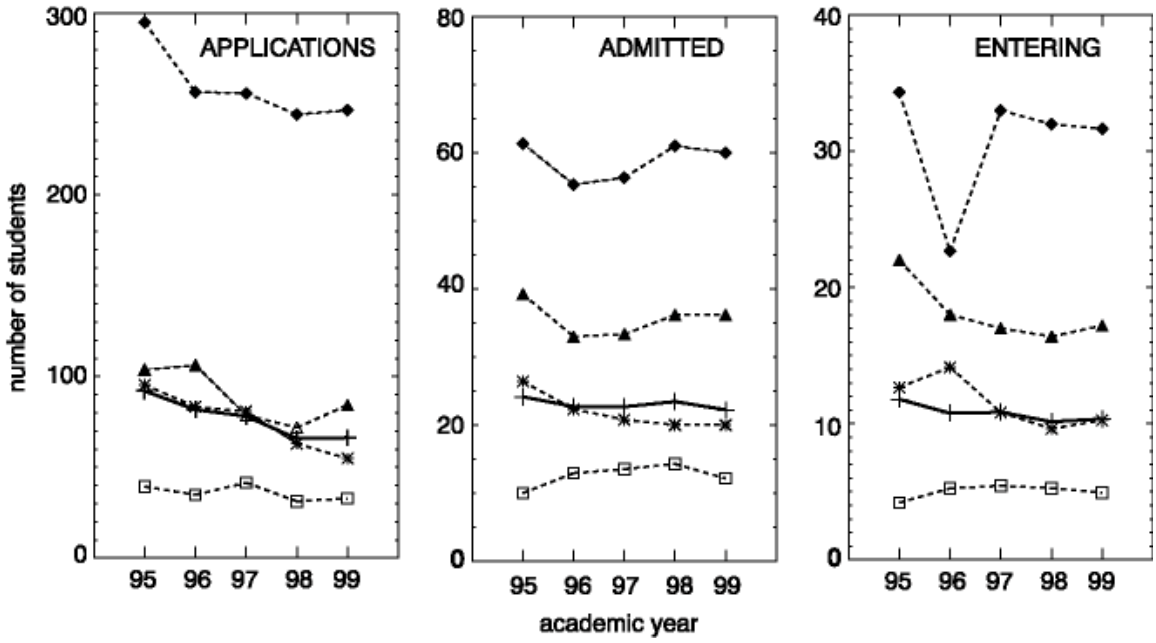


Fig. 1. Numbers of student applying, admitted and entering over five academic years. The overall average for 36 institutions is shown by the full line; the other lines are for four groups stratified by size. Line on top (diamond symbols) is for the '*largest*' institutions, line lowest down (open square symbols) is for the '*small*' institutions.

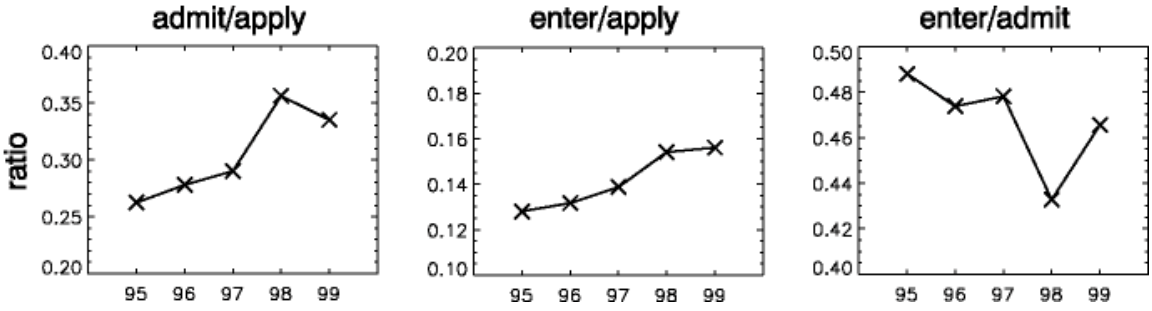


Figure 2. Ratios of the numbers of students in the apply, admit and enter categories. Data shown here are for the totals for all 36 institutions.

TABLE 2.

Mean GRE scores and standard deviations.

	VERBAL	QUANTITATIVE	ANALYTICAL
Combined	**548** ± **55**	**717** ± **33**	**652** ± **50**
3 *largest* schools	571 ± 55	722 ± 21	676 ± 38
6 *large* schools	534 ± 56	706 ± 40	631 ± 50
8 *medium* schools	551 ± 29	731 ± 13	668 ± 24
19 *small* schools	547 ± 79	709 ± 53	646 ± 66

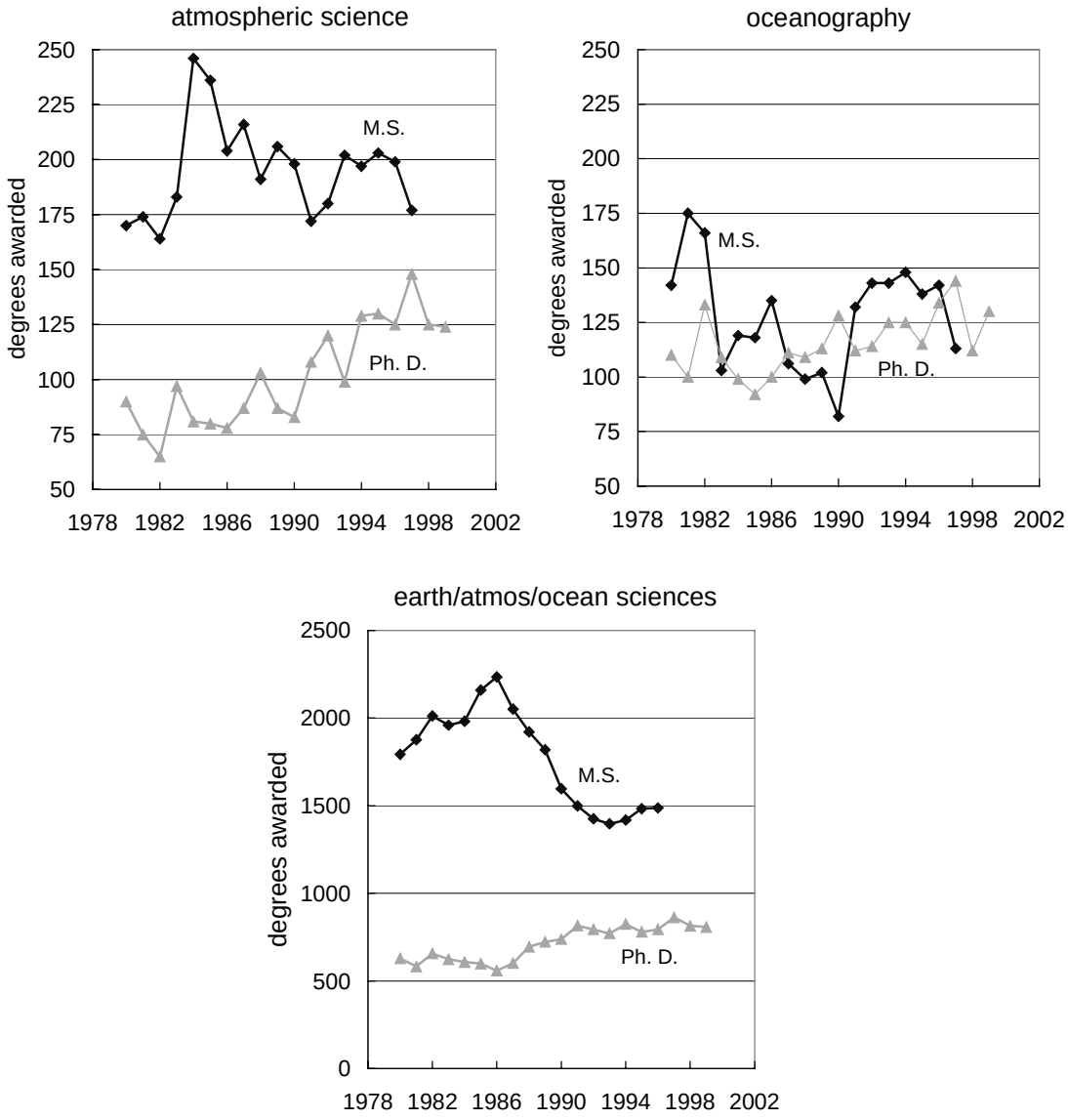
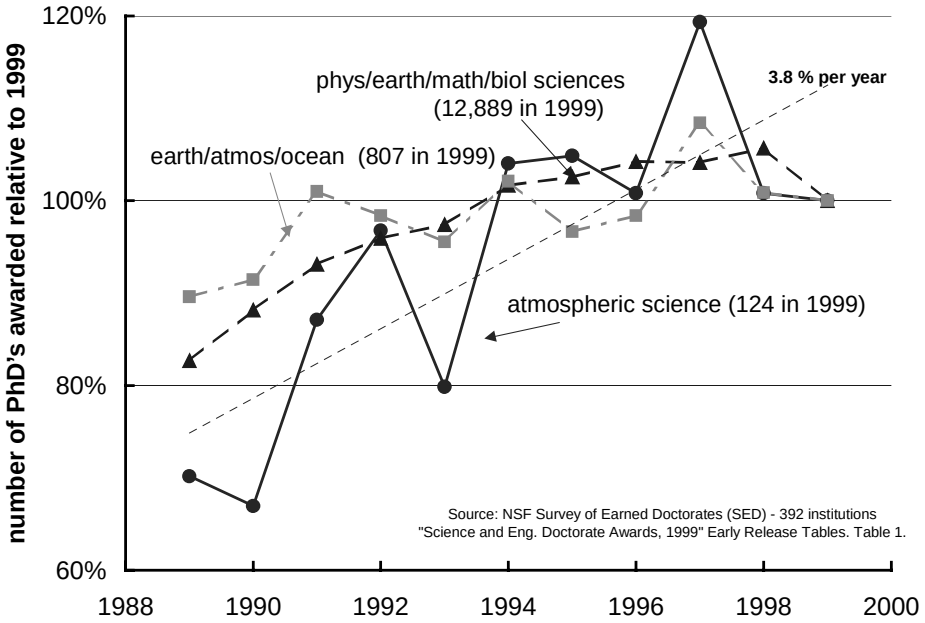


Figure 3. Degrees awarded over the period 1980-1999 in atmospheric science, oceanography (including marine sciences) and the larger grouping which adds earth sciences to the previous two groups. (Source: NSF 2000b, Tables 12, 19, 41 and 43.)



. Figure 4. Trends in the numbers of doctorates relative to 1999.

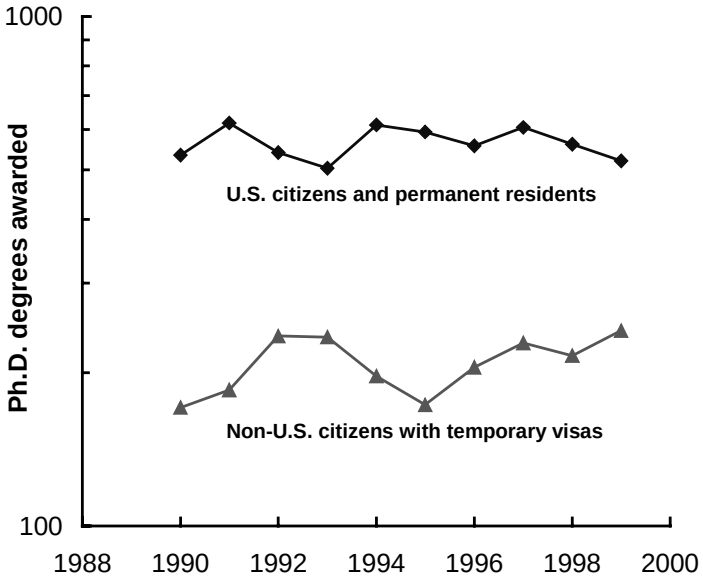


Figure 5. The number of Ph.D.'s earned in earth-atmosphere-ocean sciences by citizenship status. The ordinate is shown with a logarithmic scale to make relative changes easier to compare. (Source: NSF 2000a Table 3)

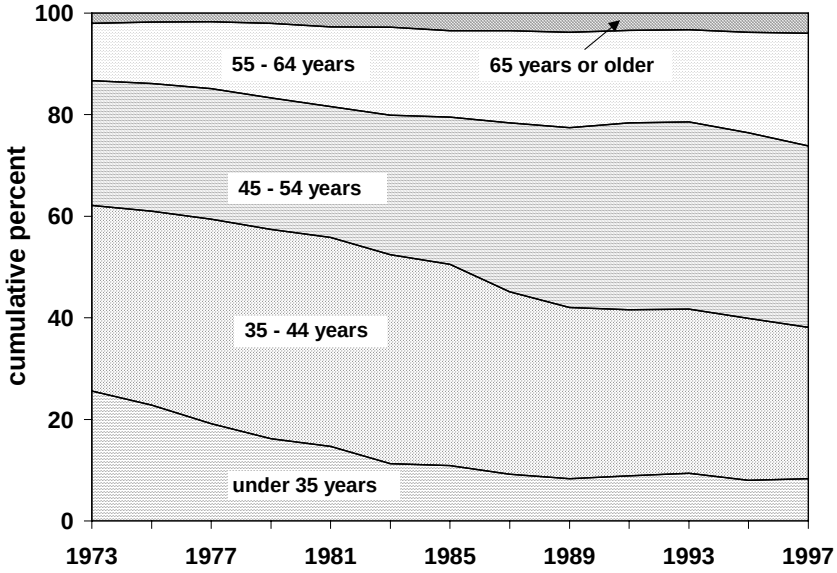


Fig. 6a. Ages of full-time doctoral scientific and engineering faculty, including full, associate, and assistant professors and instructors. (Source: NSB 2000b, Table 6-25.)

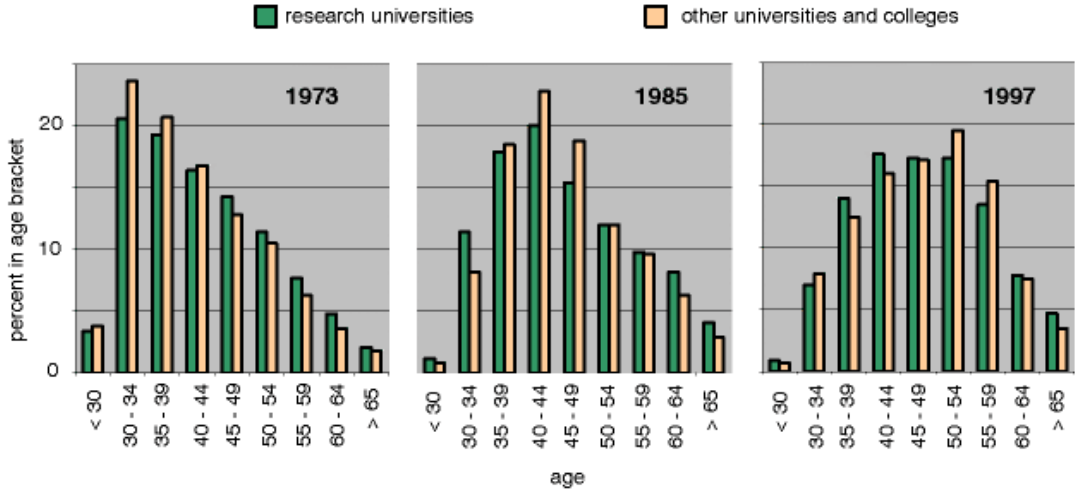


Fig. 6b. Age distribution of full-time doctoral science and engineering faculty at research universities and other academic institutions (Source: NSB 200b, Table 6-25)

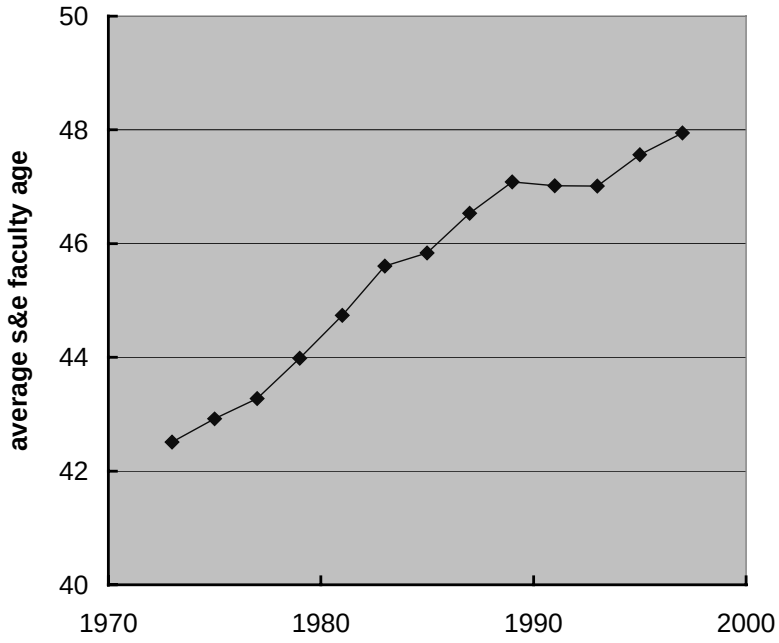


Fig. 7: Average age of all science and engineering faculty from 1973 to 1997 (Source: NSB 2000b, Table 6-25)

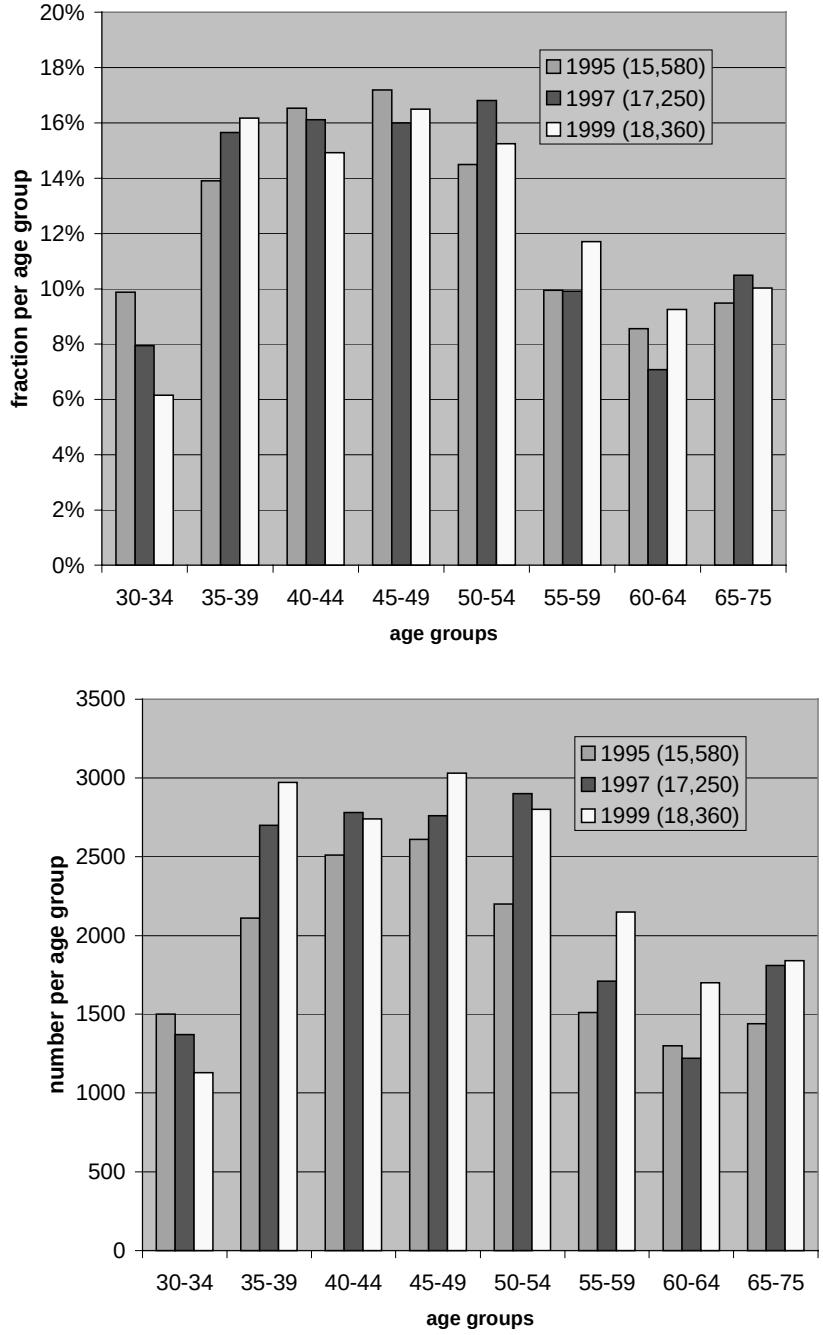


Fig. 8. The age distribution of scientists with doctoral degrees in the earth/atmosphere/ocean sciences as fraction of the total (top) and in actual numbers (bottom). The total numbers for each of the three reporting periods are indicated in the legend boxes of the diagrams. (NSF 1997, NSF 2000c and NSF 2000d)

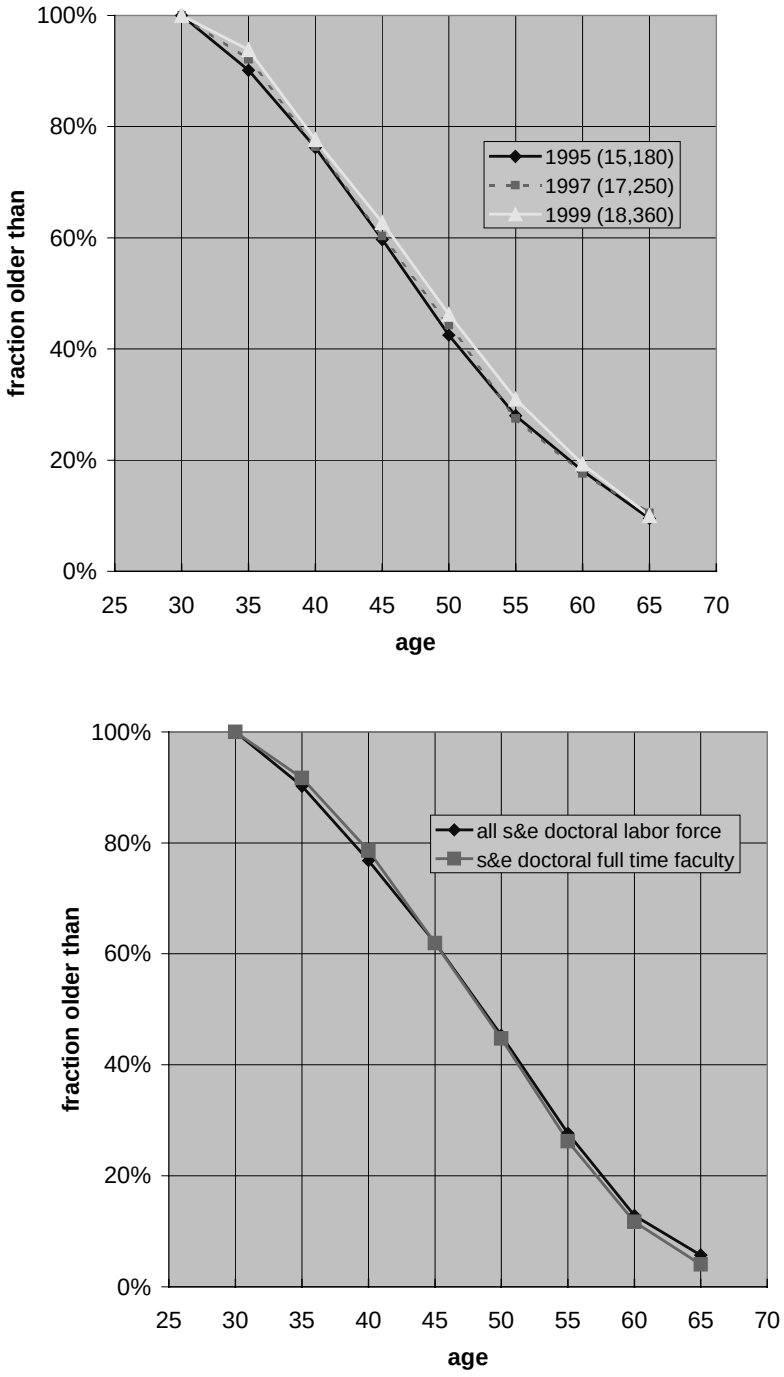


Fig. 9: Percent of doctoral scientists and engineers older than a given age.

Top: Earth/atmosphere/ocean scientists (NSF 1997, NSF 2000c,d)

Bottom: All scientists and engineers (NSB 2000B, Tables 3-19 and 6-25)

Table 3 Data from AMS/UCAR Curricula Guide 1998 and 2000

Table 3a: Degrees in atmospheric, oceanic, hydrologic and related sciences granted over periods 1995-1997 (Fall 1995 through summer 1997) and 1997-1999 (Fall 1997-summer 1999). Number of schools reporting in ( ). "1996" and "1998" numbers are obtained by normalizing the number of degrees granted in each two-year period to a constant number of schools (50 for BS, 55 for MS and 46 for PhDs) and dividing by two.:

Degree	1995-1997			1997-1999		
	#	#Sch	"1996"	#	#Sch	"1998"
BS/BA	1157	(53)	546	816	(45)	453
MS	629	(54)	320	502	(55)	251
PhD	313	(47)	153	305	(46)	153

Table 3.b Projections. First column are projections from 1998 Curricula Guide, second column are projections from 2000 Curricula Guide.

Year	BS		MS		PhD	
97-98	511		220		113	
98-99	531		226		119	
99-00	527	431	221	208	122	118
00-01	599	455	230	219	114	128
01-02	621	514	234	213	132	119
02-03		580		221		128
03-04		583		219		132

Table 4: Three scenarios based on projected needs for Ph.Ds in the atmospheric sciences in the year 2011.

Scenario	Least Need	Base	Greatest Need
Assumptions			
Pn (% inc needed)	0	15	20
Prob retirement in 10 yrs			
66+	90	95	100
56-65	80	90	100
<56	5	10	20
Results			
Ph.Ds retiring in 10 yrs	675	838	1102
PhDs needed in 2011	2700	3105	3240
New PhDs needed	675	1243	1,642
Avg new PhDs/year	68	124	164
Annual turnover rate[1]	2.5%	3.1%	4.1%

[1] Turnover rate is defined as the number of retirements over the ten years divided by the original number of Ph.Ds (N_r/N_p), averaged over the ten years.