

**2001 APS US Membership Survey  
Comprehensive Report  
by Raymond Y. Chu and Megan Henly  
AIP Statistical Research Center  
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*Executive Summary*

The APS Committee on Membership conducted the third APS Membership Survey of its U.S. members to monitor changes in the membership and their professional concerns. This report follows the 1996 APS U.S. Resident Membership Survey as part of a series initiated in 1990. Approximately every five years, these studies assess the state of the APS membership in order to update member services and benefits and understand the changes in membership demographics, opinions and growth. Judy Franz and Trish Lettieri have guided Raymond Y. Chu and Megan Henly of the AIP Statistical Research Center in the 2001 survey. This report contains all the data collected from the web-based questionnaire. Here are some highlights:

- ◆ Most members have very positive responses about the APS. The majority of respondents find APS membership dues reasonable.
- ◆ Virtually all APS members found Physics Today to be a valuable membership benefit. Among employed physicists and student members, APS News, Online APS meetings information and APS journals online at a reduced cost were also valuable benefits.
- ◆ The majority of employed members recalled joining the APS to keep up with the community of physicists and developments in the field. But the majority of current student members joined because of low dues for students and recent graduates. These respondents answered similarly when asked why they continued their APS membership.
- ◆ The majority of members are aware of What's New, the Time Line Wall Chart, and grassroots lobbying efforts by the APS.
- ◆ Most members who attended recent scientific or technological conferences did so to present a paper or talk. A smaller majority also attended to have informal discussions with colleagues.
- ◆ Time, cost and location constraints discourage members from attending more APS-sponsored meetings. However, invitations to sessions in their specialty would increase their likelihood of attending future March or April meetings.
- ◆ The majority of members attended the March General Meeting within the last two years, unusually high because of the Centennial Meeting in 2000.
- ◆ APS online journals received overwhelming positive ratings for their accessibility and usability. Nearly half of the respondents rated the APS online journal service better than other major publishers. Virtually none rate it poorer.
- ◆ Nearly half of the members prefer to receive E-mail notifications about APS programs

and events over any other means of notification.

- ◆ Paper journals are still the most frequently used format of physics research literature. However, nearly two-thirds also use online journals.
- ◆ The majority of members find the meeting information, journal information and the membership application form sections of the APS website to be valuable to them.
- ◆ This web-based survey performed comparably to paper surveys in the past. Continuation of frequent E-mail updates will allow future web-based studies.

### *Comparisons to 1996 Survey*

- ◆ The representation of employed members with temporary visas is 7% in 2001, up from 2% in 1996. The representation of women among employed members has risen from 6% in 1996 to 9% in 2001.
- ◆ APS News was rated much more positively than 5 years ago.
- ◆ The accessibility of PR and PRL online has increased as respondents are twice as likely than in 1996 to have either publications in their office or on their computers.
- ◆ Overall, awareness of APS programs have increased since 1996.

### *Comparisons between female and male respondents*

- ◆ Analyses of employed members younger than 50 years old show no significant differences in response patterns between female and male respondents, except concerning items specific to APS women's programs or events.

### *Comparisons between members who recently joined and long-time members*

- ◆ The majority of members who joined within the last two years are students. Therefore, the representations of physicists, PhDs, US citizens and males are lower compared to that of the core membership.
- ◆ Among employed members, those who joined within the last two years are significantly more likely to be doing basic research and slightly more likely to work in academe than the more senior APS members.



## *Methodology*

Vigilance in updating E-mail addresses along with web-based questionnaire designed contributed to a remarkable 45% response rate, which is comparable to the 49% paper survey response rate in 1996.

Samples of the APS U.S. members received an E-mail requesting that they complete the Web-based questionnaire on March 22. Those who did not respond to the initial mailing were sent a second E-mail request on April 4.

Three different forms were used to ensure this level of response. One group of approximately 857 members received the complete set of questions. Another 2985 received the demographics section and questions about programs and benefits. Another 2934 received the demographics section and questions about meeting, publications and web use.

<b>Table 1. Response rate and sampling frame</b>		
Sections of Survey Received	Sampled N	Response rate %
Short Form 1 - Publications, Meetings, and Web Use	2985	47
Short Form 2 - Programs and Benefits	2934	45
All Sections	857	41
Number	6776	3069

A group of responses was lost because the computer server collecting the online responses was operating improperly within the first day of the survey. Therefore, the response rate would have been higher had the server worked properly. Nonetheless, this sampling strategy and web-based methodology is highly recommended for future APS studies of this kind.

## *Analysis Strategy*

In this report, these data are being presented by type of member: employed physicists; retired members; student members; and engineers or other scientists. Please note some questions were only sent to part of the sample in a strategy to increase overall response rates.

Verbatim comments were summarized. Specific analyses compare the responses of female versus male members and respondents who recently joined APS versus those who have been members for quite a few years.

## *Programs and Benefits*

**Table 2. Member opinions about the APS, by type of membership.**

	Physicists who agreed %	Other Scientists Who agreed %	Students who agreed %	Retired who agreed %
My APS membership dues are reasonable	60	51	71	72
I support the APS primarily because it engages in community activities	43	27	38	30
APS provides members opportunities to comment on APS priorities & activities	40	39	37	40
I support the APS primarily because it provides direct member benefits	19	23	37	14
APS is too academically oriented	18	32	16	16
APS is too industrially oriented	2	3	4	5
Number of respondents	936	270	173	155

Footnote: Respondents were asked to rate their level of agreement with these statements on a scale from 1 to 5, where 1 is “Strongly disagree” and 5 is “Strongly agree”. The columns above represent those who chose 4 or 5.

- The majority of respondents find the APS membership dues reasonable. Less than 10% report that the dues were unreasonable.
- Among the selected categories, physicists were the most likely to support the APS primarily because it engages in community activities; and students were the most likely to support the APS primarily because it provides direct member benefits.
- Approximately 40% of the respondents agree that the APS provides opportunities for members to comment on APS priorities & activities.
- Among the selected categories, other scientists were the most likely to find the APS too academically oriented. Virtually none of the members felt that the APS is too industrially oriented.

**Table 3. Member rating the value of APS benefits and service, by type of membership.**

	Physicists who value %	Other Scientists who value %	Student who value %	Retired who value %
Physics Today	96	95	91	97
APS News	86	74	78	82
Online APS meetings information	86	73	85	64
APS Membership Directory (online)	79	67	58	66
APS journals online at reduced cost	79	72	80	64
Opportunity for you or your students to contribute a paper at APS meetings	79	61	88	52
Division, topical group, section and forum membership	71	60	56	59
Low member registration at APS meetings	69	63	84	38
Fellowship and awards	69	60	68	64
APS journals (hard copy) at reduced cost	67	65	69	59
APS Membership Directory (hard copy)	62	49	39	65
Career services	57	46	68	42
Industrial leaves for faculty members	40	38	42	45
Technical network	37	36	39	38
APS group & auto insurance programs	28	29	30	21
Number of respondents	948	275	173	154

Footnote: Respondents were asked to rate how valuable they found these benefits and services on a scale from 1 to 5, where 1 is “Not at all valuable”, 3 is “Valuable”, and 5 is “Extremely Valuable”. The columns above represent those who chose 3, 4 or 5.



- The majority of respondents found most of these APS membership benefits to be valuable.
- Almost all of the respondents find Physics Today to be a valuable membership benefit. Other benefits that a vast majority of employed or student respondents find valuable include: APS News; Online APS meetings information; APS journals online at reduced cost.
- APS News was rated much more positively than 5 years ago.
- Physicists were the most likely among the selected categories to find the APS online membership directory a valuable benefit of membership. The students were the most likely to value the opportunity to present a paper at an APS meeting and the low member registration dues for meetings. The retired respondents were the least likely to value benefits related to meetings.
- The industrial leaves for faculty members program and the technical network are relatively new benefits of APS. Many respondents (40%) offered no opinion on the value of these benefits, most probably because they are unfamiliar with them.
- See the supplemental tables in the appendix for the full range of opinions expressed by different types of members on this set of questions.

**Table 4. Reasons why members joined APS, by type of membership.**

	Other			
	Physicist %	Scientist %	Student %	Retired %
Keep in touch with community of physicists	54	44	30	52
Support the physics community	47	35	26	42
Keep in touch with developments in the field	46	59	32	67
Desire to submit abstract for APS meeting	30	24	39	39
APS meetings registration at reduced rates	25	16	36	9
Journal subscriptions at reduced rates	22	29	25	30
Professor/employer/colleague recommended I join	22	21	25	27
Low dues for students and recent graduates	15	15	54	4
Division, Topical Group, Section, and/or Forum Participation	13	21	3	11
Career guidance/employment help	9	10	24	3
Fellowship	2	2	3	3
Other	2	5	2	3
Number of respondents	976	298	185	163

Footnote: Respondents were asked to choose the 3 most important factors that influenced their decision to join the APS and to continue their APS membership.

- The most often recalled reason why physicists first joined the APS is to keep in touch with community of physicists.
- The most often recalled reason why other scientists and retired members first joined is to keep in touch with developments in the field.
- The most often cited reason why students first joined is the low dues for students and recent graduates.

**Table 5. Reasons why members continued APS membership, by type of membership.**

	Physicist %	Other		
		Scientist %	Student %	Retired %
Keep in touch with community of physicists	65	52	30	65
Keep in touch with developments in the field	57	74	46	79
Support the physics community	56	44	25	57
Ability to submit abstract to APS meetings	25	17	44	15
APS meetings reduced registration	20	10	35	3
Division, Topical Group, Section, and/or Forum participation	18	23	7	9
Journal subscription at reduced rates	15	22	24	15
Career guidance/employment help	6	6	22	
APS insurance programs	5	7	1	1
Fellowship	4	5	1	6
Low dues for students and recent graduates	3	3	53	-
Discounts for seniors	1	2	1	25
Other	2	2	1	2

Footnote: Respondents were asked to choose the 3 most important factors that influenced their decision to join the APS and to continue their APS membership.

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- The reasons why respondents remain APS members are the same as the ones why they first joined APS.

**Table 6. Member awareness about APS programs, by type of membership.**

	Physicist who are aware of %	Other		
		Scientist who are aware of %	Student who are aware of %	Retired who are aware of %
What's New	76	51	48	60
Time Line Wall Chart	65	58	46	65
Grassroots lobbying efforts	62	52	35	54
Speakers lists of Women and Minorities in Physics	37	21	21	29

E-mail forwarding service	37	32	42	36
Physics Central	35	33	36	19
Speakers lists of Industrial and Applied Physicists	32	22	20	31
High School Teachers' Days at APS meetings	41	26	20	25
Faculty Industrial Fellow Program	40	26	18	38
Minority Scholarship Program	45	38	30	39
Public Service Awards	36	33	32	36
Site visits to investigate institutional climate for women	22	13	19	19
Library Outreach Program	32	22	17	31
Matching Membership Program	23	17	16	18
Career Liaisons in physics departments	22	12	19	13
Teacher Scientist Alliance	24	16	12	27
Technical Network	23	25	17	23
PhysTEC	19	19	12	24

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Footnote: Respondents were asked to rate their knowledge or awareness of the above programs and activities on a scale from 1 to 5, where 1 is "Never heard of program", 3 is "Heard of program", and 5 is "Know it very well". The above columns represent those who chose 4 or 5.

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- The majority of employed and retired respondents are aware of What’s New, Time Line Wall Chart and the grassroots lobbying efforts of APS.
- Among the selected respondent groups, physicists are the most likely to have heard of the High School Teachers’ Days at APS meeting, Faculty Industrial Fellow Program and the Minority Scholarship Program.
- Students are the most likely to have heard of the E-mail forwarding service.

**Table 7. Priority that APS should give in investigating and responding to the following issues by respondent type, 2001.**

	Other		Students	Retired	All
	Physicists	Scientists			
	%	%	%	%	%
Energy	84	77	82	86	83
Environmental issues related to physics	75	75	73	75	75
Future of the national laboratories	68	61	77	61	67
General health of the profession	68	60	58	58	65
Ethics issues in scientific research	52	54	50	52	52
National security/arms control	53	47	26	66	50
National missile defense	51	48	30	67	50
Changing role of industry	48	51	58	38	48
Early and mid-career issues	46	45	50	28	45
Number of respondents	955	286	180	160	1581

Footnote: Respondents were asked to rate the priority the APS should give in investigating and responding to the selected issues on a scale of 1 to 5, where 1 is “Lowest priority”, and 5 is “Highest Priority”. The percentages in this table represent those who chose 4 or 5.

**Table 8. Performance of APS in investigating and responding to the following issues by respondent type.**

	Other		Students	Retired	All
	Physicists	Scientists			
	%	%	%	%	%
National missile defense	58	49	34	70	55

General health of the profession	69	69	58	70	68
National security/arms control	60	54	30	71	56
Future of the national laboratories	58	65	58	59	59
Energy	53	44	36	65	51
Changing role of industry	56	52	49	56	55
Environmental issues related to physics	51	42	28	65	48
Ethics issues in scientific research	54	51	46	54	52
Early and mid-career issues	54	50	47	46	51
Number of respondents	954	285	173	161	1573

Footnote: Respondents were asked to rate how well APS performed in investigating and responding to the selected issues on a scale of 1 to 5, where 1 is “Poor”, 3 is “Good” and 5 is “Excellent”. The percentages in this table represent those who chose 3, 4 or 5.

**Table 9. Priority that APS should give to the following public affairs or education and outreach activities by respondent type, 2001.**

	Other				
	Physicists	Scientists	Students	Retired	All
	%	%	%	%	%
Inform policy decision makers about physics	92	82	83	88	89
Educate public about physics	85	81	83	83	84
Improve education for new physics teachers	78	73	75	78	77
Improve pre-college physics/math education	75	77	73	81	76
Lobby for increased funding for physics	77	64	80	59	73
Educate industry leaders about the value of physicists training	74	67	72	72	73
Improve undergraduate physics education	68	65	62	69	67
Facilitate members interactions with policy decision-makers	64	52	54	65	61
Improve graduate physics education	57	54	57	60	56
Reduce barriers for success for women and minorities in physics	57	52	48	62	56
Promote international cooperation and opportunities in physics	45	40	59	48	46
Monitor human rights of physicists internationally	35	33	35	43	35

Professional development courses (at APS meetings)	32	34	35	33	32
Other	1	5		3	2
Number of respondents	920	273	166	150	1509

Footnote: Respondents were asked to rate the priority that APS should give to selected public affairs and education outreach activities on a scale of 1 to 5, where 1 is “Poor”, 3 is “Good” and 5 is “Excellent”. The percentages in this table represent those who chose 3, 4 or 5.

**Table 10. Performance of APS in the following public affairs or education and outreach activities by respondent type, 2001.**

	Physicists	Other Scientists	Students	Retired	All
	%	%	%	%	%
Lobby for increased funding for physics	72	74	67	70	71
Inform policy decision makers about physics	70	70	62	66	69
Monitor human rights of physicists internationally	65	56	27	70	61
Reduce barriers for success for women and minorities in physics	63	56	53	69	62
Promote international cooperation and opportunities in physics	58	66	44	67	59
Educate public about physics	56	47	54	54	54
Improve graduate physics education	49	55	47	57	51
Facilitate members interactions with policy decision-makers	54	45	40	48	51
Improve undergraduate physics education	51	53	46	58	52
Educate industry leaders about the value of physicists training	45	44	42	46	44
Improve education for new physics teachers	44	40	36	45	43
Professional development courses (at APS meetings)	41	39	39	39	40

Improve pre-college physics/math education	42	41	27	43	40
Other	2	4	5	3	3
Number of respondents	760	192	106	130	1188

Footnote: Respondents were asked to rate how well APS performed in public affairs and education and outreach activities on a scale of 1 to 5, where 1 is “Poor”, 3 is “Good” and 5 is “Excellent”. The percentages in this table represent those who chose 3, 4 or 5.

## *Meetings*

**Table 11. Reasons for attending the recent scientific or technological conferences, by respondent type, 2001.\***

	Physicists	Other Scientists	Students	Retired	All
	%	%	%	%	%
Present a paper or give a talk	72	71	76	54	71
Have informal discussions with colleagues	58	54	37	65	56
Keep abreast of the field	45	52	37	48	45
Interested in topical content	43	39	37	43	42
Hear about new ideas	34	31	42	34	34
Serve as session chair or organizer	17	16	1	12	15
Location	11	10	19	11	11
Other	4	3	7	8	4
Number of respondents	864	227	139	86	1316

Footnote: \* Only those who attended a scientific or technological conference within the last two years were asked to respond to this question. Respondents were asked to choose up to 3 most important reasons.

- APS members most often cite presenting a paper or giving a talk as the reasons for attending scientific or technological conferences. Having informal discussions with colleagues is the second most often cited reason. Keeping abreast of the field and interest in the topical content of the conferences are third and fourth most cited reasons. The proportion of respondents citing these reasons is virtually unchanged for each respondent type since the 1996 survey.
- Nearly three-quarters of employed and student members present papers or give talks at these conferences. Physicists and other scientists attend these meetings for the same reasons.
- Half of the retired members who attend meetings do so to present papers or give talks, but more attend meetings to have informal discussions with colleagues.

**Table 12. Aspects that discourage attending more APS-sponsored meetings, by respondent type, 2001.**

	Physicists	Other	Students	Retired	All
	%	Scientists			
Work or time conflicts	54	48	51	11	49
Limited travel budget	45	40	54	43	45
Other meetings more important	38	35	7	24	33
Content not relevant to my work	31	42	29	29	32
High cost	24	20	33	38	26
Meeting too large/too long	27	16	12	13	22
Too few sessions interesting to me	20	20	17	26	20
Meeting attendance not supported by employer	15	21	15	11	15
Location	10	10	13	11	11
Dominated by academic concerns	7	9	11	3	7
Other	5	5	7	20	7
Number of respondents	992	296	175	152	1615

Footnote: Respondents were asked to choose all reasons that applied.

- Many members are limited by their schedules and travel budget and have to be selective in choosing which conferences to attend. The exception to this are retired members who report few time or work conflicts.
- Therefore, along with time and travel budget limitations, the importance and relevance of meetings are among the most often cited aspects that discourage members from attending more APS-sponsored meetings.

**Table 13. Changes that would increase likelihood of attending March or April meetings, by respondent type, 2001.\***

	Physicists %	Other Scientists %	Students %	Retired %	All %
More invited sessions in my specialty	57	64	46	35	55
A location that I could drive to	32	34	37	44	34
Lower registration fees	26	26	37	35	28
Lower hotel costs	24	17	49	42	27
A location that reduces air travel costs	19	20	30	24	21
Held over a weekend	19	14	17	2	16
A more attractive location (even if more expensive)	11	4	11	11	10
More networking opportunities	8	10	17	2	9
More invited sessions on subjects outside my specialty	7	2	3	14	6
Held during the week	7	2	7	1	6
Better career assistance at meetings	4	4	17	1	5
Other	11	11	6	23	12
Number of respondents	557	189	89	88	923

Footnote: \* Only those who did not attend a March or April meeting within the last two years were asked to respond to this question. Respondents were asked to choose up to 3 changes.

- The majority of employed members indicated that they are more likely to attend a March or April meeting if there were more invited sessions in their specialty. This suggestion was not asked in the 1996 survey. Their responses are consistent with the answer to the generic question of why do you attend conferences and what discourages you from attending more APS-sponsored conferences.
- Consistent with the concept of time conflicts, about a third of the respondents might attend if the location were within driving distance.
- Hotel costs are a concern with many students and retired members. Registration fees were a significant, but somewhat lower concern among students and retired members.
- As in the 1996 survey, more members prefer weekend meetings than weekday meetings.

**Table 14. Reasons why members attended recent scientific or technological conferences, by meeting attendance 2001**

	March %	April %	Neither %	All %
Present a paper, give a talk	80	72	67	71
Informal discussions with colleagues	55	61	56	56
Keeping abreast of the field	40	35	50	45
Topical content	28	57	46	42
New ideas	37	36	32	34
Session a chair, organizer	12	20	15	15
Location	9	9	13	11
Other	5	2	4	4
Number of respondents	396	126	810	1316

**Table 15. Things that could be improved about the March and April meeting by meeting attendance, 2001**

	March %	April %	Neither %	All %
Lower hotel room rates	48	40	32	44
More invited sessions in my specialty	46	38	37	42
More plenary sessions on subjects outside my specialty	30	29	35	30
Lower registration fees	25	27	27	26
More networking opportunities	22	12	29	21
Locate the meeting so as to reduce air travel costs	19	21	20	20
Participation by a reduced number of APS divisions, topical groups or forums	20	11	16	18
Held over weekend	10	29	19	16
Better career assistance at meetings	15	10	11	13
Participation by a larger number of APS divisions, topical groups or forums	8	19	14	12
Held during the week	0	0	10	8
Other	12	9	14	12

Number of respondents	210	90	79	365
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**Table 16. Aspects that discourage more meetings attendance, by meeting attendance, 2001**

	March %	April %	Neither %	All %
Work or time conflicts	49	58	46	48
Limited travel budget	52	49	42	45
Other meetings more important	25	37	34	32
Content not relevant to my work	26	17	35	32
High cost	31	29	23	25
Meeting too large, too long	24	21	21	22
Too few sessions interesting to me	17	21	21	20
Meeting attendance not supported by employer	13	11	16	15
Location	0	0	11	10
Dominated by academic concerns	8	2	7	7
Other	5	6	7	6
Number of respondents	382	125	1136	1629

**Table 17. Meetings attended in the last two years, by respondent type, 2001.\***

	Other				All %
	Physicists %	Scientists %	Students %	Retired %	
March General Meeting	47	43	72	57	51
April General Meeting	20	9	4	27	17
DPP-Division of Plasma Physics	13	7	9	3	11
DNP-Division of Nuclear Physics	12	-	8	3	10
DAMOP-Division of Atomic, Molecular and Optical Physics	9	3	3	-	7
DFD-Division of Fluid Dynamics	3	33	3	8	7
Section Meetings	6	4	5	22	7
DPF-Division of Particles and Fields	7	-	1		5
PAC-Particle Accelerator Conference	4	2	1	3	3
Topical Group	2	6	2	8	3
DLS meetings	2	2	2	-	2
GEC-Gaseous Electronics Conference	2	2	-	-	1
DCOMP-Division of Computational Physics	1	-	-	-	1
Number of respondents	543	97	117	37	794

Footnote: \* Only those who attended a scientific or technological conference within the last two years were asked to respond to this question.

- The majority of respondents attended the March General Meeting within the last two years. This number is unusually high because of the Centennial Meeting in 2000.

**Table 18. Have you attended any APS unit meeting within the last five years?**

	Other				All %
	Physicists %	Scientists %	Students %	Retired %	
Yes	37	20	23	21	31
No	63	80	77	79	69
Number of Respondents	1004	297	186	168	1655

- Physicists are twice as likely than other scientists to attend an APS unit meeting within the last five years.

**Table 19. Number of APS unit meetings attended in the last five years**

	Physicists	Other Scientists	Students	Retired	All
	%	%	%	%	%
1	32	45	56	33	36
2	29	29	24	40	29
3 or more	39	26	20	27	35

Footnote: There were 566 respondents to this question.

**Table 20. Number of scientific conferences attended in the last two years**

	Physicists	Other Scientists	Students	Retired	All
	%	%	%	%	%
Zero	11	20	24	45	17
1 or 2	23	19	43	22	24
3 or 4	34	27	25	21	31
5 or more	32	34	8	12	28

Footnote: There were 1601 respondents to this question.

- Over 60% of employed members attended three or more meetings in the last two years.

**Table 21. Physical disabilities which limit members' ability to attend APS meetings**

	Physicists	Other Scientists	Students	Retired	All
	%	%	%	%	%
Has no disability or impairment	98	99	100	83	96
Hearing impairment	1	-	-	10	2
Mobility impairment	1	-	-	3	1
Visual impairment	-	-	-	1	-
Other	2	-	1	8	2

Footnote: A dash "--" indicates less than one percent

Columns do not add to 100% because respondents indicated all that applied.

- Few APS members report that they have disabilities except for retired members. It should be noted that the number of retired members has doubled among APS membership over the last ten years.

## *Publications*

**Table 22. Accessibility and usability of APS online journals, by respondent type, 2001.**

	Physicists %	Other Scientists %	Students %	Retired %	All %
Easy accessibility of APS online journals	80	73	81	59	78
Easy usability of APS online journals	80	71	87	60	79

- APS online journals received very favorable ratings on the ease of accessibility and usability. Virtually all respondents think APS online journal service is similar or better than other major publishers.
- Physicists and students were more likely than other scientists to find the APS online journals easily accessible and usable. Retired members were least likely to find the online journals easily accessible and usable.
- Students were the most likely group to indicate that APS online journals are better than other major publishers. Retired members are the least likely, but none of them think it is poorer than other publishers.

**Table 23. Comparison of APS online journal service to other major publishers, by respondent type, 2001.**

	Physicists %	Other Scientists %	Students %	Retired %	All %
Better	47	30	55	28	45
Similar	51	67	43	72	53
Poorer	1	3	1	0	2
Number of Respondents	1032	313	197	177	1719

- Nearly half of the respondents rated the APS online journal service better than other major publishers. Virtually none rate it poorer.

**Table 24. Importance of peer-reviewed journals for maintaining long-term record of physics research, by respondent type, 2001.**

	Physicists %	Other Scientists %	Students %	Retired %	All %
Very important	86	84	82	80	85
Somewhat important	12	13	18	10	13
Unimportant	2	3	1	9	3
Number of Respondents	1035	317	197	184	1733

- Most of the members feel that peer-reviewed journals are important for maintain long-term record of physics research. Very few of them say so, but retired members are the most likely to find this unimportant.

**Table 25. Location of latest copy of Physical Review or Physical Review Letters, by respondent type, 2001.**

	Physicists %	Other Scientists %	Students %	Retired %	All %
In office or on computer	44	27	56	19	39
Down the hall or in building	22	13	24	19	20
Walking distance from building	18	26	15	20	19
Too far to go or don't know	17	35	6	42	21
Number of Respondents	1039	320	200	185	1744

- Two out of five members can access their latest copy of Physical Review or Physical Review Letters in their office or on their computer. Most employed physicists and students have these publications accessible nearby. Most other scientists and retired members have their issues of PR or PRL in another building or are unsure where their nearest issues are.

**Table 26. Format of physics research literature accessed monthly or more often, by respondent type, 2001.**

	Physicists %	Other Scientists %	Students %	Retired %	All %
Paper journals	90	81	91	80	87
Online journals	66	53	58	27	62
Preprint archive	44	15	49	18	37
Hard copy preprints	38	23	26	25	33
Document delivery or interlibrary loan	21	19	16	10	19
Number of Respondents	1026	314	199	181	1718

- Paper journals are still the most frequently accessed format of physics research literature by APS members. Almost all respondents accessed paper journals regularly.
- Two-thirds of employed physicists and over half of the other scientists and students access online journals monthly or more often for physics research literature. This is a dramatic increase from 1996 when only two-fifths of employed physicists and half of the students used online journals. Another change from 1996 shows that employed physicists are now more likely than students to use online journals regularly.
- Nearly half of the employed physicists and students also used preprint archives regularly, a level of use which is virtually unchanged since 1996.
- Most employed physicists and students in 1996 also used photocopied articles. This choice was omitted in the 2001 survey.

**Table 27. Access of Physical Review or Physical Review Letters within the past year, 2001**

	Physicists	Other Scientists	Students	Retired	All
	%	%	%	%	%
At least once	58	36	72	23	52
None	42	64	28	77	48
Number of Respondents	1038	322	199	188	1747

**Table 28. Respondents negatively affected by the cancellation of physics journals by their institution within the last five years**

	Physicists	Other Scientists	Students	Retired	All
	%	%	%	%	%
Affected by cancellation	26	14	17	12	22
Number of Respondents	1032	313	197	177	1719

**Table 29. Respondents who feel their institutions should go to online only subscriptions and organizations such as APS should guarantee access to journal archives**

	Physicists	Other Scientists	Students	Retired	All
	%	%	%	%	%
Online only	77	78	83	66	77
Number of Respondents	992	303	193	154	1642

**Table 30. Research articles submitted for publication or electronic dissemination in 2000**

	Other				All %
	Physicists %	Scientists %	Students %	Retired %	
0	26	38	51	60	36
1	14	14	25	16	15
2	17	14	14	10	15
3	14	10	6	4	11
4	7	6	1	3	6
5-9	14	11	3	6	11
10-14	6	5	-	1	4
15-19	1	1	-	-	1
20-24	1	1	-	-	1
25-29	-	-	-	-	-
30-49	-	-	-	-	-
50+	-	-	-	-	-
Number of Respondents	1027	314	195	181	1717

**Table 31. Articles posted on public electronic archives that were not also submitted to refereed publication in year 2000.**

	Other				All %
	Physicists %	Scientists %	Students %	Retired %	
0	87	89	96	94	89
1	5	4	3	2	4
2	4	4	1	2	4
3	1	2	-	1	1
4	1	1	-	-	1
5-9	2	-	-	1	1
10-14	-	-	-	-	-
15-19	-	-	-	-	-
20+	-	-	-	-	-
Number of Respondents	1003	308	189	175	1675

## *Web Use*

**Table 32. Member ratings of APS Web site information**

	Physicists who value %	Other Scientists who value %	Students who value %	Retired who value %	All %
Meeting Information	69	58	73	37	65
Journal Information	60	50	66	27	56
Membership renewal or application	54	55	69	24	54
Meeting Registration	53	39	65	23	49
Member directory	50	42	35	40	46
What's New	40	30	34	39	37
Division, Topical Group, Section & Forum Information	35	31	25	30	32
APS News	34	31	32	33	33
Physical Review Focus	29	19	25	18	26
Career/employment information	28	18	39	3	26
Information about programs	25	21	27	14	24
Physics Central	15	15	18	8	15
Other	1	1	3	1	1

- Most employed physicists and students value the meeting information on the APS website. Journal information is valued second. The majority of respondents also valued the website for membership renewal or application, the meetings registration, and the member directory.

**Table 33. How often members access APS Web site information**

	Physicists who access %	Other Scientists who access %	Students who access %	Retired who access %	All %
Meeting Information	80	72	82	54	77
Journal Information	76	66	81	45	73
Membership Renewal or Application	63	68	82	35	64
Member Directory	57	52	42	51	54
Meeting Registration	55	42	70	27	52
What's New	54	49	49	50	52
Division, topical group, section & forum information	46	41	39	41	44
APS News	46	42	46	43	45
Information about programs	41	37	42	26	39
Physical Review Focus	37	23	34	26	33
Career/employment information	34	24	49	4	32
Physics Central	25	25	24	13	24
Other	3	2	2	3	3

- The measurement of effective use of the APS website varies by the section of the website. Regular or multiple visits to frequently updated sections might indicate an effective webpage, whereas a single visit per year to the online renewal webpage can also be considered effective. This table only shows the extent to which each APS website section has been visited by respondents within the past year. More detailed data can be found in the supplemental tables.
- The APS website section in which the most members have visited is meetings information. The second is journal information. The majority of respondents have also visited the website for membership renewal or application, the membership directory, the meetings registration and What's New.
- Since other scientists and retired members are the least likely to attend APS meetings, they are also the least-likely to visit the APS website for meetings information.
- Retired members are the least likely to access the web and therefore the least likely to access the APS homepage.

## *Demographics*

<b>Table 34. Professional Self-Identification</b>						
	Overall		Workforce, 2001		Not in Workforce, 2001	
	2001 %	1996 %	PhDs %	Non-PhDs %	Students %	Retired %
Physicist	76	74	79	39	77	75
Engineer	11	12	10	27	11	8
Chemist	6	7	6	3	6	9
Other	7	7	5	31	6	8
Number of Respondents	3014	1361	2244	150	348	295

Footnote: This and all other tables includes US Resident members only.

<b>Table 35. Professional Self-Identification by Degree, 2001</b>		
	Physicists %	Engineers and Other Scientists %
PhD	85	75
Masters	9	15
Bachelors	5	7
Other	1	3
Number of Respondents	2298	712

<b>Table 36. Employment Status, 2001</b>	
	%
Full Time	95
Part Time	4
Unemployed	1
Number of Respondents	2353

<b>Table 37. Citizenship by employment status, 2001</b>			
	Student %	Retired %	Employed %

U.S.	58	99	82
Non-US, Permanent Visa	4	1	10
Non-US, Temporary Visa	38	-	8
Number of Respondents	324	244	2387

**Table 38. Employment sector, 2001**

	Physicists %	Engineers and Other Scientists %	Overall %
University, UARI, Other Academic	55	41	51
Industry, Consulting, Self-Employed	18	38	23
Government, FFR&DC	26	17	24
Other, Non-Profit, Medical Services	1	4	2
Number of Respondents	1884	587	2471

**Table 39. Work activity, 2001**

	Physicists %	Engineers and Other Scientists %	Overall %
Basic, Long-Range Applied Research	53	34	48
Teaching	17	15	16
Short-Range Applied, DDE*	11	22	14
Administration	10	10	10
Other	9	19	12
Number of Respondents	1879	584	2463

**Table 40. Predominant work subfields, 2001.**

Physicists	Engineers and Other Scientists
Condensed Matter Physics	Chemical Physics

Elementary Particles and Fields	Electrical Engineering
Nuclear Physics	Fluid Dynamics
Atomic, Molecular, and Optics	High Polymer Physics
Plasma Physics	Materials Science
Astronomy or Astrophysics	Computer Science
Materials Science	Chemistry
Physics Education	Systems Engineering
Accelerator Physics	Administration
Biophysics	Condensed Matter Physics
	Computational Physics

Footnote: The subfields listed above are listed in rank order and represent approximately 75% of the subfields by employed APS members.

**Table 41. Gender, 2001**

	Physicists %	Engineers and Other Scientists %	Students %	Retired %
Female	9	11	20	3
Male	91	89	80	97
Number of Respondents	2282	708	344	294

**Table 42. Gender by citizenship, 2001**

	US %	Permanent Visa %	Temporary Visa %
Female	8	11	14
Male	92	89	86
Number of Respondents	2410	255	309

**Table 43. Age by Gender, 2001**

Age Group	Female %	Male %
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30 or younger	28	10
31-40	37	23
41-50	18	22
51-60	12	21
61-70	3	16
71 or older	2	8
Number of respondents	262	2694

**Table 44. Preferred means of learning about APS-sponsored programs and events, by respondent type, 2001.**

	Physicists %	Other Scientists %	Students %	Retired %	All %
E-mail notification	47	47	48	34	46
APS news	36	39	25	56	37
APS website	12	10	20	5	12
Paper mail	8	9	10	14	9
Announcements and flyers at meetings	2	2	4	1	2
Number of Respondents	1754	536	340	276	2906

- Nearly half of the employed physicists and students prefer to receive E-mail notifications about APS programs and events over any other means of notification. The majority of retired members prefer APS news over any other means of learning about the APS. Considering that approximately two-thirds of retired members have E-mail addresses, APS News is the primary means for retired members to keep up with APS programs and events.
- APS News is the preferred way to learn about APS programs and events by over a third of the employed members. It is the second most valuable benefit of APS membership.

**Table 45. Years as an APS member**

	Physicists %	Other Scientists %	Students %	Retired %	All %
0	1	1	5	-	1
1	3	5	36	-	7
2	3	5	17	-	5

3	2	5	15	-	4
4	2	3	10	-	3
5-9	14	13	15	-	12
10-14	12	15	1	2	11
15-19	13	11	1	1	10
20-24	14	16	-	2	11
25-29	8	10	-	3	7
30-34	13	8	-	10	10
35-39	7	5	-	12	7
40-44	5	3	-	25	6
45-49	2	-	-	16	3
50-54	1	-	-	23	3
55-59	-	-	-	3	-
60-64	-	-	-	2	-
65+	-	-	-	1	-
<b>Number of Respondents</b>	<b>1817</b>	<b>565</b>	<b>343</b>	<b>316</b>	<b>3041</b>

**Table 46. Highest Physics degree by respondents, 2001**

	Other				
	Physicists %	Scientists %	Students %	Retired %	All %
PhD	90	24	2	60	60
Masters	3	9	38	6	9
Bachelor	2	14	27	3	8
Other	1	2	4	2	2
None	4	51	29	29	21
Number of Respondents	1096	482	244	174	1996

**Table 47. Country in which members earned their highest degree, 2001**

	Other				
	Physicists %	Scientists %	Students %	Retired %	All %
US	86	92	74	94	87
Abroad	14	8	26	6	13
Number of Respondents	1791	565	335	313	3004

## *Supplemental Tables*

**Table S1. Physicists opinions about the APS.**

	Agree %	Midpoint %	Disagree %	No Opinion %
My APS membership dues are reasonable	60	29	8	3
I support the APS primarily because it engages in community activities	43	25	27	5
APS provides members ample opportunities to comment on APS priorities & activities	40	29	17	14
I support the APS primarily because it provides direct member benefits	19	21	56	4
APS is too academically oriented	18	22	49	11
APS is too industrially oriented	2	18	67	13

Footnote: Respondents were asked to rate their level of agreement with these statements on a scale from 1 to 5, where 1 is “Strongly disagree” and 5 is “Strongly agree”. The “Agree” column represents those who chose 4 or 5. The “Disagree” column represents those who chose 1 or 2. There were 936 respondents to this question. “Midpoint” represents those who chose 3.

**Table S2. Other Scientists opinions about the APS.**

	Agree %	Midpoint %	Disagree %	No Opinion %
My APS membership dues are reasonable	51	37	9	3
APS provides members ample opportunities to comment on APS priorities & activities	39	32	13	16
APS is too academically oriented	32	20	38	10
I support the APS primarily because it engages in community activities	27	34	31	8
I support the APS primarily because it provides direct member benefits	23	21	47	9
APS is too industrially oriented	3	19	65	13

Footnote: Respondents were asked to rate their level of agreement with these statements on a scale from 1 to 5, where 1 is “Strongly disagree” and 5 is “Strongly agree”. The “Agree” column represents those who chose 4 or 5. The “Disagree” column represents those who chose 1 or 2. There were 270 respondents to this question. “Midpoint” represents those who chose 3.

**Table S3. Student opinions about the APS.**

	Agree %	Midpoint %	Disagree %	No Opinion %
My APS membership dues are reasonable	71	22	4	3
APS provides members ample opportunities to comment on APS priorities & activities	38	25	12	25
I support the APS primarily because it provides direct member benefits	37	25	30	8
I support the APS primarily because it engages in community activities	37	22	29	12
APS is too academically oriented	16	21	43	20
APS is too industrially oriented	4	22	53	21

Footnote: Respondents were asked to rate their level of agreement with these statements on a scale from 1 to 5, where 1 is “Strongly disagree” and 5 is “Strongly agree”. The “Agree” column represents those who chose 4 or 5. The “Disagree” column represents those who chose 1 or 2. There were 173 respondents to this question. “Midpoint” represents those who chose 3.

**Table S4. Retired members opinions about the APS.**

	Agree %	Midpoint %	Disagree %	No Opinion %
My APS membership dues are reasonable	72	21	4	3
APS provides members ample opportunities to comment on APS priorities & activities	40	25	13	22
I support the APS primarily because it engages in community activities	30	26	36	8
APS is too academically oriented	16	14	58	12
I support the APS primarily because it provides direct member benefits	15	16	62	7
APS is too industrially oriented	5	19	59	17

Footnote: Respondents were asked to rate their level of agreement with these statements on a scale from 1 to 5, where 1 is “Strongly disagree” and 5 is “Strongly agree”. The “Agree” column represents those who chose 4 or 5. The “Disagree” column represents those who chose 1 or 2. There were 155 respondents to this question. “Midpoint” represents those who chose 3.

**Table S5. Physicists opinions about the value of APS benefits and services.**

	Very Valuable %	Valuable %	Not Valuable %	No Opinion %
Physics Today	84	12	3	1
Online APS meetings information	63	23	8	6
Opportunity for you or your students to contribute a paper at APS meetings	61	18	10	11
APS News	58	28	11	3
APS online journals at reduced cost	57	22	11	10
APS Membership Directory (online/CD)	48	30	14	8
Low member registration at APS meetings	42	27	14	17
Division, topical group, section and forum membership	40	31	20	9
Fellowship and awards	41	28	17	14
APS hard copy journals at reduced cost	36	30	23	11
APS Membership Directory (hard copy)	35	27	32	6
Career Services	31	26	17	26
Industrial leaves for faculty members	15	25	18	42
Technical Network	14	23	20	43
APS group & auto insurance programs	13	15	44	28

Footnote: Respondents were asked to rate how valuable they found these benefits and services on a scale from 1 to 5, where 1 is “Not at all valuable” and 5 is “Extremely Valuable”. The “Very Valuable” column represents those who chose 4 or 5, the “Valuable” column is those who chose 3, and the “Not Valuable” column represents those who chose 1 or 2. There were 948 respondents to this question.

**Table S6. Other Scientists opinions about the value of APS benefits and services.**

	Very Valuable %	Valuable %	Not Valuable %	No Opinion %
Physics Today	76	18	3	3
APS online journals at reduced cost	49	22	12	17
Online APS meetings information	47	26	13	14
APS News	45	28	21	6
Opportunity for you or your students to contribute a paper at APS meetings	45	16	15	24
APS Membership Directory online	40	27	24	9
APS hard copy journals at reduced cost	37	28	19	16
Fellowship and awards	37	23	18	22
Division, topical group, section and forum membership	36	24	22	18
Low member registration at APS meetings	35	27	14	24
APS Membership Directory (hard copy)	25	24	41	10
Career services	25	24	20	31
Technical Network	18	18	19	45
Industrial leaves for faculty members	17	22	21	40
APS group & auto insurance programs	15	15	44	26

Footnote: Respondents were asked to rate how valuable they found these benefits and services on a scale from 1 to 5, where 1 is “Not at all valuable” and 5 is “Extremely Valuable”. The “Very Valuable” column represents those who chose 4 or 5, the “Valuable” column is those who chose 3, and the “Not Valuable” column represents those who chose 1 or 2. There were 945 respondents to this question. There were 275 respondents to this question.

**Table S7. Students opinions about the value of APS benefits and services.**

	Very Valuable %	Valuable %	Not Valuable %	No Opinion %
Opportunity for you or your students to contribute a paper at APS meetings	76	12	2	10
Physics Today	75	16	5	4
Online APS meetings information	68	17	6	9
Low member registration at APS meetings	66	18	4	12
APS online journals at reduced cost	58	22	9	11
Career Services	45	22	6	27
Fellowship and awards	44	24	8	24
APS News	42	35	17	6
APS hard copy journals at reduced cost	38	30	20	12
Division, topical group, section and forum membership	32	24	20	24
APS Membership Directory (online/CD)	24	34	23	19
Industrial leaves for faculty members	20	22	9	49
Technical Network	19	21	10	50
APS Membership Directory (hard copy)	15	25	40	20
APS group & auto insurance programs	12	18	27	43

Footnote: Respondents were asked to rate how valuable they found these benefits and services on a scale from 1 to 5, where 1 is “Not at all valuable” and 5 is “Extremely Valuable”. The “Very Valuable” column represents those who chose 4 or 5, the “Valuable” column is those who chose 3, and the “Not Valuable” column represents those who chose 1 or 2. There were 945 respondents to this question. There were 173 respondents to this question.

**Table S8. Retired members opinions about the value of APS benefits and services.**

	Very Valuable %	Valuable %	Not Valuable %	No Opinion %
Physics Today	85	12	1	2
APS News	62	20	12	6
APS Membership Directory (hard copy)	44	21	27	8
APS online journals at reduced cost	43	21	10	26
APS Membership Directory online	41	25	14	20
APS hard copy journals at reduced cost	37	22	16	25
Online APS meetings information	37	27	13	23
Fellowship and awards	37	27	12	24
Opportunity for you or your students to contribute a paper at APS meetings	36	16	9	39
Division, topical group, section and forum membership	36	23	23	18
Industrial leaves for faculty members	25	20	10	45
Low member registration at APS meetings	20	18	9	53
Career services	20	22	17	41
Technical Network	19	19	12	50
APS group & auto insurance programs	8	12	39	41

Footnote: Respondents were asked to rate how valuable they found these benefits and services on a scale from 1 to 5, where 1 is “Not at all valuable” and 5 is “Extremely Valuable”. The “Very Valuable” column represents those who chose 4 or 5, the “Valuable” column is those who chose 3, and the “Not Valuable” column represents those who chose 1 or 2. There were 945 respondents to this question. There were 154 respondents to this question.

**Table S9. Reasons why physicists joined APS and continue their membership.**

	Joined APS	Continue with
	%	APS
		%
Keep in touch with community of physicists	54	65
Keep in touch with developments in the field	46	57
Support the physics community	47	56
Desire to submit abstract for APS meeting	30	25
APS meetings registration at reduced rates	25	20
Journal subscriptions at reduced rates	22	15
Professor, employer, colleague recommended I join	22	*
Division, Topical Group, Section or Forum participation	13	18
Low dues for students and recent graduates	15	3
Career guidance or employment help	9	6
Fellowship	2	4
Other	2	5

Footnote: Respondents were asked to choose the 3 most important factors that influenced their decision to join the APS and to continue their APS membership. Asterisk denotes that item was excluded from that question.

**Table S10. Reasons why other scientists joined APS and continue their membership.**

	Joined APS	Continue with
	%	APS
		%
Keep in touch with developments in the field	59	74
Keep in touch with community of physicists	44	52
Support the physics community	35	44
Journal subscriptions at reduced rates	29	22
Desire to submit abstract for APS meeting	24	17
Division, Topical Group, Section or Forum participation	21	23
Professor, employer, colleague recommended I join	21	*
APS meetings registration at reduced rates	16	10
Low dues for students and recent graduates	15	3
Career guidance or employment help	10	6
Fellowship	2	2
Other	5	5

Footnote: Respondents were asked to choose the 3 most important factors that influenced their decision to join the APS and to continue their APS membership. Asterisk denotes that item was excluded from that question.

**Table S11. Reasons why retired members joined APS and continue their membership.**

	Joined APS %	Continue with APS %
Keep in touch with developments in the field	67	79
Keep in touch with community of physicists	52	65
Support the physics community	42	57
Desire to submit abstract for APS meeting	39	15
Journal subscriptions at reduced rates	30	15
Professor, employer, colleague recommended I join	27	*
Discount for seniors	*	26
Division, Topical Group, Section or Forum participation	11	9
APS meetings registration at reduced rates	9	3
Low dues for students and recent graduates	4	-
Career guidance or employment help	3	-
Fellowship	3	6
Other	3	2

Footnote: Respondents were asked to choose the 3 most important factors that influenced their decision to join the APS and to continue their APS membership. Asterisk denotes that item was excluded from that question.

**Table S12. Reasons why student members joined APS and continue their membership.**

	Joined APS %	Continue with APS %
Low dues for students and recent graduates	54	53
Desire to submit abstract for APS meeting	39	44
APS meetings registration at reduced rates	36	35
Keep in touch with developments in the field	32	46
Keep in touch with community of physicists	30	30
Support the physics community	26	25
Journal subscriptions at reduced rates	25	24
Professor, employer, colleague recommended I join	25	*
Career guidance or employment help	24	22
Division, Topical Group, Section or Forum participation	3	7
Fellowship	3	1
Other	2	1

Footnote: Respondents were asked to choose the 3 most important factors that influenced their decision to join the APS and to continue their APS membership. Asterisk denotes that item was excluded from that question.

**Table S13. Physicists familiarity with APS programs.**

	Know Program %	Heard of Program %	Do not know program %	No Opinion %
What's New	58	18	20	4
Time Line Wall Chart	35	30	29	6
Grassroots lobbying efforts	25	37	32	6
Speakers lists of Women and Minorities in Physics	17	20	53	10
E-mail forwarding service	13	24	56	7
Physics Central	12	23	58	7
Speakers lists of Industrial and Applied Physicists	12	20	58	10
High School Teachers' Days at APS meetings	11	30	51	8
Faculty Industrial Fellow Program	11	29	52	8
Minority Scholarship Program	10	35	46	9
Public Service Awards	9	27	55	9
Site visits to investigate institutional climate for women	9	13	68	10
Library Outreach Program	9	24	59	8
Matching Membership Program	8	16	62	9
Career Liaisons in physics departments	7	15	69	9
Teacher Scientist Alliance	5	18	68	8
Technical Network	5	19	69	8
PhysTEC	4	15	72	9

Footnote: Respondents were asked to rate their knowledge or awareness of the above programs and activities on a scale from 1 to 5, where 1 is "Never heard of program", 3 is "Heard of program", and 5 is "Know it very well". The "Know program" column represents those who chose 4 or 5. The "Do not know program" column represents those who chose 1 or 2. There were 954 respondents to this question.

**Table S14. Other Scientists familiarity with APS programs.**

	Know Program %	Heard of Program %	Do not know program %	No Opinion %
What's New	30	21	40	10
Time Line Wall Chart	25	33	36	6
Grassroots lobbying efforts	18	34	42	6
E-mail forwarding service	11	22	58	9
Public Service Awards	10	23	54	13
Physics Central	9	22	57	12
Minority Scholarship Program	8	30	46	16
High School Teachers' Days at APS meetings	6	20	60	14
Speakers lists of Women and Minorities in Physics	7	14	64	15
Faculty Industrial Fellow Program	6	21	60	13
Speakers lists of Industrial and Applied Physicists	5	17	65	13
Site visits to investigate institutional climate for women	5	9	69	17
Technical Network	5	20	67	8
Matching Membership Program	4	13	68	15
Library Outreach Program	4	18	65	13
PhysTEC	3	16	70	11
Teacher Scientist Alliance	3	13	70	14
Career Liaisons in physics departments	3	10	73	14

Footnote: Respondents were asked to rate their knowledge or awareness of the above programs and activities on a scale from 1 to 5, where 1 is "Never heard of program", 3 is "Heard of program", and 5 is "Know it very well". The "Know program" column represents those who chose 4 or 5. The "Do not know program" column represents those who chose 1 or 2. There were 291 respondents to this question.

**Table S15. Student familiarity with APS programs.**

	Know Program %	Heard of Program %	Do not know program %	No Opinion %
What's New	27	21	44	8
Time Line Wall Chart	24	22	49	5
E-mail forwarding service	17	25	52	6
Physics Central	15	22	56	7
Grassroots lobbying efforts	12	23	58	7
Public Service Awards	9	23	60	8
Matching Membership Program	7	8	77	8
Site visits to investigate institutional climate for women	7	12	69	12
Speakers lists of Women and Minorities in Physics	7	14	68	11
High School Teachers' Days at APS meetings	6	14	71	9
Minority Scholarship Program	6	25	60	9
Career Liaisons in physics departments	5	14	73	8
Technical Network	4	13	76	7
Faculty Industrial Fellow Program	4	14	73	9
Speakers lists of Industrial and Applied Physicists	4	16	69	11
PhysTEC	3	8	78	11
Teacher Scientist Alliance	3	9	78	10
Library Outreach Program	3	13	73	11

Footnote: Respondents were asked to rate their knowledge or awareness of the above programs and activities on a scale from 1 to 5, where 1 is "Never heard of program", 3 is "Heard of program", and 5 is "Know it very well". The "Know program" column represents those who chose 4 or 5. The "Do not know program" column represents those who chose 1 or 2. There were 179 respondents to this question.

**Table S16. Retired members familiarity with APS programs.**

	Know Program %	Heard of Program %	Do not know program %	No Opinion %
What's New	44	16	25	15
Time Line Wall Chart	36	29	24	11
Grassroots lobbying efforts	29	25	30	16
E-mail forwarding service	16	20	50	14
Speakers lists of Industrial and Applied Physicists	12	19	48	21
Public Service Awards	12	24	45	19
Speakers lists of Women and Minorities in Physics	11	18	49	22
Faculty Industrial Fellow Program	10	27	45	18
Minority Scholarship Program	10	29	42	19
PhysTEC	8	16	57	19
Physics Central	8	11	62	19
Library Outreach Program	6	24	51	19
Technical Network	5	18	58	19
High School Teachers' Days at APS meetings	5	21	54	20
Site visits to investigate institutional climate for women	4	15	60	21
Teacher Scientist Alliance	3	23	54	20
Career Liaisons in physics departments	3	10	67	20
Matching Membership Program	3	15	62	20

Footnote: Respondents were asked to rate their knowledge or awareness of the above programs and activities on a scale from 1 to 5, where 1 is "Never heard of program", 2 is "Heard of program", and 5 is "Know it very well". The "Know program" column represents those who chose 4 or 5. The "Do not know program" column represents those who chose 1 or 2. There were 153 respondents to this question.

**Table S17. Priority that APS should give in investigating and responding to the following issues by physicists, 2001.**

	High priority %	Midpoint %	Low priority %	No opinion %
Energy	84	12	4	1
Environmental issues related to physics	75	17	7	1
General health of the profession	68	20	9	2
Future of the national laboratories	68	23	8	1
National security/arms control	53	25	19	3
Ethics issues in scientific research	52	30	17	1
National missile defense	51	23	23	3
Changing role of industry	48	34	16	3
Early and mid-career issues	46	35	17	2

Footnote: Respondents were asked to rate the priority the APS should give in investigating and responding to the selected issues on a scale of 1 to 5, where 1 is “Lowest priority”, and 5 is “Highest Priority”. “High priority” shows those who chose 4 or 5. “Midpoint” shows those who chose 3. “Low priority” shows those who chose 1 or 2. There were 955 respondents to this item.

**Table S18. Performance of APS in investigating and responding to the following issues by physicists, 2001.**

	Very Good %	Good %	Poor %	No Opinion %
National missile defense	34	24	13	29
National security/arms control	33	27	12	28
General health of the profession	31	38	20	11
Future of the national laboratories	24	34	27	15
Energy	21	32	17	30
Environmental issues related to physics	19	32	21	29
Changing role of industry	18	38	23	21
Early and mid-career issues	17	37	27	20
Ethics issues in scientific research	16	38	23	24

Footnote: Respondents were asked to rate how well APS performed in investigating and responding to the selected issues on a scale of 1 to 5, where 1 is “Poor”, 3 is “Good” and 5 is “Excellent”. In this table, “Very Good” represents those who chose 4 or 5. “Good” shows those who chose 3. “Poor” shows those who chose 1 or 2. There were 954 respondents to this item.

**Table S19. Priority that APS should give in investigating and responding to the following issues by other scientists, 2001.**

	High priority %	Midpoint %	Low priority %	No opinion %
Energy	77	13	8	2
Environmental issues related to physics	75	15	9	2
Future of the national laboratories	61	25	12	2
General health of the profession	60	22	15	4
Ethics issues in scientific research	54	28	17	2
Changing role of industry	51	32	15	2
National missile defense	48	20	28	4
National security/arms control	47	26	23	4
Early and mid-career issues	45	34	20	2

Footnote: Respondents were asked to rate the priority the APS should give in investigating and responding to the selected issues on a scale of 1 to 5, where 1 is “Lowest priority”, and 5 is “Highest Priority”. “High priority” shows those who chose 4 or 5. “Midpoint” shows those who chose 3. “Low priority” shows those who chose 1 or 2. There were 286 respondents to this item.

**Table S20. Performance of APS in investigating and responding to the following issues by other scientists, 2001.**

	Very Good %	Good %	Poor %	No Opinion %
General health of the profession	31	38	22	10
National security/arms control	26	28	9	37
National missile defense	26	23	12	39
Future of the national laboratories	26	39	21	15
Ethics issues in scientific research	21	30	28	22
Changing role of industry	19	33	31	18
Energy	17	27	17	39
Early and mid-career issues	17	33	32	18
Environmental issues related to physics	15	27	18	40

Footnote: Respondents were asked to rate how well APS performed in investigating and responding to the selected issues on a scale of 1 to 5, where 1 is “Poor”, 3 is “Good” and 5 is “Excellent”. In this table, “Very Good” represents those who chose 4 or 5. “Good” shows those who chose 3. “Poor” shows those who chose 1 or 2. There were 285 respondents to this item.

**Table S21. Priority that APS should give in investigating and responding to the following issues by student members, 2001.**

	High priority %	Midpoint %	Low priority %	No opinion %
Energy	82	13	3	2
Future of the national laboratories	77	14	6	4
Environmental issues related to physics	73	18	8	1
Changing role of industry	58	21	17	4
General health of the profession	58	24	13	5
Early and mid-career issues	50	33	14	3
Ethics issues in scientific research	50	26	19	6
national missile defense	30	21	42	7
national security/arms control	26	29	39	6

Footnote: Respondents were asked to rate the priority the APS should give in investigating and responding to the selected issues on a scale of 1 to 5, where 1 is “Lowest priority”, and 5 is “Highest Priority”. “High priority” shows those who chose 4 or 5. “Midpoint” shows those who chose 3. “Low priority” shows those who chose 1 or 2. There were 180 respondents to this item.

**Table S22. Performance of APS in investigating and responding to the following issues by student members, 2001.**

	Very Good %	Good %	Poor %	No Opinion %
Changing role of industry	25	24	22	29
Future of the national laboratories	25	33	21	22
General health of the profession	24	34	20	23
Early and mid-career issues	19	28	29	24
Energy	17	19	14	50
Ethics issues in scientific research	15	31	26	27
national missile defense	15	19	13	53
national security/arms control	11	19	14	55
Environmental issues related to physics	10	18	17	55

Footnote: Respondents were asked to rate how well APS performed in investigating and responding to the selected issues on a scale of 1 to 5, where 1 is “Poor”, 3 is “Good” and 5 is “Excellent”. In this table, “Very Good” represents those who chose 4 or 5. “Good” shows those who chose 3. “Poor” shows those who chose 1 or 2. There were 173 respondents to this item.

**Table S23. Priority that APS should give in investigating and responding to the following issues by retired members, 2001.**

	High priority %	Midpoint %	Low priority %	No opinion %
Energy	86	13	1	
Environmental issues related to physics	75	13	11	1
national missile defense	67	16	16	2
national security/arms control	66	16	17	1
Future of the national laboratories	61	26	10	3
General health of the profession	58	24	15	3
Ethics issues in scientific research	52	29	16	4
Changing role of industry	38	39	16	6
Early and mid-career issues	28	45	19	8

Footnote: Respondents were asked to rate the priority the APS should give in investigating and responding to the selected issues on a scale of 1 to 5, where 1 is “Lowest priority”, and 5 is “Highest Priority”. “High priority” shows those who chose 4 or 5. “Midpoint” shows those who chose 3. “Low priority” shows those who chose 1 or 2. There were 160 respondents to this item.

**Table S24. Performance of APS in investigating and responding to the following issues by retired members, 2001.**

	Very Good %	Good %	Poor %	No Opinion %
National missile defense	51	19	15	15
National security/arms control	44	27	15	15
General health of the profession	40	30	16	14
Energy	34	31	18	17
Environmental issues related to physics	31	34	19	16
Future of the national laboratories	31	29	16	25
Ethics issues in scientific research	26	27	17	29
Changing role of industry	20	36	15	29
Early and mid-career issues	19	26	22	32

Footnote: Respondents were asked to rate how well APS performed in investigating and responding to the selected issues on a scale of 1 to 5, where 1 is “Poor”, 3 is “Good” and 5 is “Excellent”. In this table, “Very Good” represents those who chose 4 or 5. “Good” shows those who chose 3. “Poor” shows those who chose 1 or 2. There were 161 respondents to this item.

**Table S25. Priority that APS should give to the following public affairs or education and outreach activities by physicists, 2001.**

	High priority %	Midpoint %	Low priority %	No opinion %
Inform policy decision makers about physics	92	5	2	1
Educate public about physics	85	10	3	1
Improve education for new physics teachers	78	15	4	3
Lobby for increased funding for physics	77	15	6	2
Improve pre-college physics/math education	75	16	6	3
Educate industry leaders about the value of physicists training	74	17	7	3
Improve undergraduate physics education	68	23	6	3
Facilitate members interactions with policy decision-makers	64	24	9	3
Reduce barriers for success for women and minorities in physics	57	23	16	3
Improve graduate physics education	57	30	11	3
Promote international cooperation and opportunities in physics	45	32	20	3
Monitor human rights of physicists internationally	35	35	27	4
Professional development courses (at APS meetings)	32	37	25	6
Other	1	0	1	98

Footnote: Respondents were asked to rate the priority that APS should give to selected public affairs and education outreach activities on a scale of 1 to 5, where 1 is “Lowest priority”, and 5 is “Highest Priority”. “High priority” shows those who chose 4 or 5. “Midpoint” shows those who chose 3. “Low priority” shows those who chose 1 or 2. There were 920 respondents in this item.

**Table S26. Performance of APS in the following public affairs or education and outreach activities by physicists, 2001.**

	Very Good %	Good %	Poor %	No Opinion %
Lobby for increased funding for physics	37	35	18	10
Inform policy decision makers about physics	34	36	19	11
Monitor human rights of physicists internationally	31	34	9	26
Reduce barriers for success for women and minorities in physics	30	33	15	22
Promote international cooperation and opportunities in physics	24	34	13	29
Facilitate members interactions with policy decision-makers	20	34	19	27
Educate public about physics	20	36	35	9
Improve graduate physics education	16	33	20	31
Improve undergraduate physics education	16	35	20	28
Professional development courses (at APS meetings)	14	27	13	46
Improve education for new physics teachers	13	31	24	32
Improve pre-college physics/math education	12	30	28	31
Educate industry leaders about the value of physicists training	11	33	27	28
Other		1	1	97

Footnote: Respondents were asked to rate how well APS performed in public affairs and education and outreach activities on a scale of 1 to 5, where 1 is "Poor", 3 is "Good" and 5 is "Excellent". In this table, "Very Good" represents those who chose 4 or 5. "Good" shows those who chose 3. "Poor" shows those who chose 1 or 2. There were 760 respondents in this item.

**Table S27. Priority that APS should give to the following public affairs or education and outreach activities by other scientists, 2001.**

	High priority %	Midpoint %	Low priority %	No opinion %
Inform policy decision makers about physics	82	14	4	0
Educate public about physics	81	16	3	0
Improve pre-college physics/math education	77	14	6	3
Improve education for new physics teachers	73	18	6	4
Educate industry leaders about the value of physicists training	67	24	6	1
Improve undergraduate physics education	65	24	5	6
Lobby for increased funding for physics	64	24	12	1
Improve graduate physics education	54	29	11	7
Facilitate members interactions with policy decision-makers	52	32	13	3
Reduce barriers for success for women and minorities in physics	52	23	22	4
Promote international cooperation and opportunities in physics	40	32	23	5
Professional development courses (at APS meetings)	34	33	25	8
Monitor human rights of physicists internationally	33	33	29	5
Other	5	1		93

Footnote: Respondents were asked to rate the priority that APS should give to selected public affairs and education outreach activities on a scale of 1 to 5, where 1 is “Lowest priority”, and 5 is “Highest Priority”. “High priority” shows those who chose 4 or 5. “Midpoint” shows those who chose 3. “Low priority” shows those who chose 1 or 2. There were 273 respondents to this item.

**Table S28. Performance of APS in the following public affairs or education and outreach activities by other scientists, 2001.**

	Very Good %	Good %	Poor %	No Opinion %
Lobby for increased funding for physics	41	33	15	11
Inform policy decision makers about physics	38	32	21	9
Monitor human rights of physicists internationally	29	27	15	30
Promote international cooperation and opportunities in physics	28	38	9	26
Reduce barriers for success for women and minorities in physics	19	37	17	28
Improve graduate physics education	18	37	17	29
Educate public about physics	17	30	45	8
Improve undergraduate physics education	16	37	20	27
Facilitate members interactions with policy decision-makers	15	30	24	31
Educate industry leaders about the value of physicists training	13	32	34	22
Improve education for new physics teachers	11	29	31	29
Improve pre-college physics/math education	11	30	31	28
Professional development courses (at APS meetings)	9	30	11	50
Other		3	2	94

Footnote: Respondents were asked to rate how well APS performed in public affairs and education and outreach activities on a scale of 1 to 5, where 1 is "Poor", 3 is "Good" and 5 is "Excellent". In this table, "Very Good" represents those who chose 4 or 5. "Good" shows those who chose 3. "Poor" shows those who chose 1 or 2. There were 192 respondents to this item.

**Table S29. Priority that APS should give to the following public affairs or education and outreach activities by student members, 2001.**

	High priority %	Midpoint %	Low priority %	No opinion %
Inform policy decision makers about physics	83	12	3	2
Educate public about physics	83	12	4	2
Lobby for increased funding for physics	80	12	6	2
Improve education for new physics teachers	75	15	8	3
Improve pre-college physics/math education	73	20	6	2
Educate industry leaders about the value of physicists training	72	20	5	2
Improve undergraduate physics education	62	26	9	3
Promote international cooperation and opportunities in physics	59	22	14	5
Improve graduate physics education	57	23	13	7
Facilitate members interactions with policy decision-makers	54	25	17	4
Reduce barriers for success for women and minorities in physics	48	30	16	7
Monitor human rights of physicists internationally	35	31	26	8
Professional development courses (at APS meetings)	35	36	20	9
Other		1		97

Footnote: Respondents were asked to rate the priority that APS should give to selected public affairs and education outreach activities on a scale of 1 to 5, where 1 is “Lowest priority”, and 5 is “Highest Priority”. “High priority” shows those who chose 4 or 5. “Midpoint” shows those who chose 3. “Low priority” shows those who chose 1 or 2. There were 166 respondents to this item.

**Table S30. Performance of APS in the following public affairs or education and outreach activities by student members, 2001.**

	Very Good %	Good %	Poor %	No Opinion %
Lobby for increased funding for physics	37	30	15	18
Inform policy decision makers about physics	31	31	17	21
Reduce barriers for success for women and minorities in physics	28	25	20	27
Improve graduate physics education	20	27	17	36
Educate public about physics	19	35	27	19
Promote international cooperation and opportunities in physics	18	26	21	36
Facilitate members interactions with policy decision-makers	15	25	17	43
Improve undergraduate physics education	15	31	17	37
Educate industry leaders about the value of physicists training	14	27	19	40
Professional development courses (at APS meetings)	13	26		44
Improve education for new physics teachers	12	24	19	45
Monitor human rights of physicists internationally	10	17	19	54
Improve pre-college physics/math education	7	20	26	47
Other	3	2	3	93

Footnote: Respondents were asked to rate how well APS performed in public affairs and education and outreach activities on a scale of 1 to 5, where 1 is “Poor”, 3 is “Good” and 5 is “Excellent”. In this table, “Very Good” represents those who chose 4 or 5. “Good” shows those who chose 3. “Poor” shows those who chose 1 or 2. There were 106 respondents to this item.

**Table S31. Priority that APS should give to the following public affairs or education and outreach activities by retired members, 2001.**

	High priority %	Midpoint %	Low priority %	No opinion %
Inform policy decision makers about physics	88	6	3	3
Educate public about physics	83	12		2
Improve pre-college physics/math education	81	9		6
Improve education for new physics teachers	78	12		6
Educate industry leaders about the value of physicists training	72	12	9	8
Improve undergraduate physics education	69	19		8
Facilitate members interactions with policy decision-makers	65	22	9	4
Reduce barriers for success for women and minorities in physics	62	17	16	6
Improve graduate physics education	60	22	7	12
Lobby for increased funding for physics	59	21	14	6
Promote international cooperation and opportunities in physics	48	30	15	8
Monitor human rights of physicists internationally	43	27	22	8
Professional development courses (at APS meetings)	33	32	23	12
Other	3			96

Footnote: Respondents were asked to rate the priority that APS should give to selected public affairs and education outreach activities on a scale of 1 to 5, where 1 is “Lowest priority”, and 5 is “Highest Priority”. “High priority” shows those who chose 4 or 5. “Midpoint” shows those who chose 3. “Low priority” shows those who chose 1 or 2. There were 150 respondents to this item.

**Table S32. Performance of APS in the following public affairs or education and outreach activities by retired members, 2001.**

	Very Good %	Good %	Poor %	No Opinion %
Lobby for increased funding for physics	42	28	12	19
Inform policy decision makers about physics	37	29	18	17
Improve graduate physics education	37	20		31
Reduce barriers for success for women and minorities in physics	35	33	12	19
Monitor human rights of physicists internationally	33	37	8	22
Promote international cooperation and opportunities in physics	32	35		26
Improve undergraduate physics education	28	30	12	31
Improve pre-college physics/math education	24	19	28	29
Educate public about physics	21	33	37	9
Improve education for new physics teachers	21	25	22	32
Facilitate members interactions with policy decision-makers	18	30	22	30
Professional development courses (at APS meetings)	18	22	9	52
Educate industry leaders about the value of physicists training	14	32	22	32
Other		2	2	95

Footnote: Respondents were asked to rate how well APS performed in public affairs and education and outreach activities on a scale of 1 to 5, where 1 is “Poor”, 3 is “Good” and 5 is “Excellent”. In this table, “Very Good” represents those who chose 4 or 5. “Good” shows those who chose 3. “Poor” shows those who chose 1 or 2. There were 130 respondents to this item.

**Table S33. Preferred means of learning about APS-sponsored programs and events, physicists, 2001.**

	Preferred %	Midpoint %	Not Preferred %
E-mail notification	73	15	12
APS news	68	22	10
APS website	33	31	36
Paper mail	25	22	53
Announcements and flyers at meetings	6	9	85

**Table S34. Preferred means of learning about APS-sponsored programs and events, other scientists, 2001.**

	Preferred %	Midpoint %	Not Preferred %
E-mail notification	68	20	12
APS news	66	22	12
APS website	37	27	36
Paper mail	30	17	53
Announcements and flyers at meetings	7	10	83

**Table S35. Preferred means of learning about APS-sponsored programs and events, students, 2001.**

	Preferred %	Midpoint %	Not Preferred %
E-mail notification	69	16	14
APS news	53	30	17
APS website	45	29	27
Paper mail	29	10	61
Announcements and flyers at meetings	11	15	74

**Table S36. Preferred means of learning about APS-sponsored programs and events, retired members, 2001.**

	Preferred %	Midpoint %	Not Preferred %
E-mail notification	63	18	18
APS news	79	17	4
APS website	21	27	52
Paper mail	41	26	33
Announcements and flyers at meetings	5	10	85

**Table S37. Format of physics research literature accessed monthly or more often, physicists, 2001.**

	Daily %	Weekly %	Monthly %	Rarely %	Never %
Paper journals	5	25	41	23	6
Online journals	10	32	24	21	13
Preprint archive	13	16	16	24	32
Hard copy preprints	2	14	22	40	23
Document delivery or interlibrary loan	0	3	17	44	35

**Table S38. Format of physics research literature accessed monthly or more often, other scientists, 2001.**

	Daily %	Weekly %	Monthly %	Rarely %	Never %
Paper journals	3	19	37	25	17
Online journals	6	24	23	22	25
Preprint archive	2	6	8	27	57
Hard coy preprints	1	8	14	35	42
Document delivery or interlibrary loan	0	4	15	36	46

**Table S39. Format of physics research literature accessed monthly or more often, students, 2001.**

	Daily %	Weekly %	Monthly %	Rarely %	Never %
Paper journals	5	27	40	25	4
Online journals	18	43	25	11	4
Preprint archive	11	19	19	28	23
Hard copy preprints	1	9	16	40	34
Document delivery or interlibrary loan	1	2	13	46	39

**Table S40. Format of physics research literature accessed monthly or more often, retired members, 2001.**

	Daily %	Weekly %	Monthly %	Rarely %	Never %
Paper journals	1	26	29	25	19
Online journals	1	13	14	24	49
Preprint archive	4	5	9	18	64
Hard copy preprints	3	8	14	31	44
Document delivery or interlibrary loan	2	8	8	34	56

**Table S41. Accessibility APS online journals, by respondent type, 2001.**

	Easy Access %	Midpoint %	Difficult Access %	No opinion %
Physicists	80	10	4	8
Other scientists	73	8	4	15
Students	81	13	3	3
Retired	59	9	7	24

**Table S42. Usability APS online journals, by respondent type, 2001.**

	Easy Access %	Midpoint %	Difficult Access %	No opinion %
Physicists	80	10	2	8
Other scientists	71	11	4	14
Students	87	6	3	3
Retired	60	14	10	17

**Table S43. Physicist Ratings of APS Web information**

	Valuable %	Midpoint %	Not Valuable %	No Opinion %
Meeting Information	47	22	3	28
Journal Information	41	19	5	35
Meeting Registration	39	13	1	47
Membership Renewal or application	38	17	3	42
Member Directory	31	19	4	46
What's New	23	17	6	54
Division, Topical Group, Section & Forum Information	18	17	7	58
Career/employment information	17	11	7	65
Physical Review Focus	16	12	4	68
APS News	16	18	7	59
Information about programs	10	15	7	68
Physics Central	7	8	5	80
Other	1	-	1	98

**Table S44. Other Scientists' Ratings of APS Web information**

	Valuable %	Midpoint %	Not Valuable %	No Opinion %
Membership renewal or application	35	20	4	41
Meeting Information	32	26	3	39
Journal Information	28	22	3	47
Meeting Registration	26	13	2	59
Member directory	21	21	3	55
What's New	17	12	7	64
APS News	15	16	5	64
Physical Review Focus	12	8	3	77
Division, Topical Group, Section & Forum Information	12	19	5	64
Career/employment information	9	9	5	77
Information about programs	9	12	7	72
Physics Central	6	9	7	78
Other	1	-	1	98

**Table S45. Students' Ratings of APS Web information**

	Valuable %	Midpoint %	Not Valuable %	No Opinion %
Meeting Information	55	18	3	24
Meeting Registration	54	11	3	32
Journal Information	50	16	6	28
Membership renewal or application	48	20	4	28
Member directory	22	13	5	60
APS News	19	13	5	63
What's New	19	15	4	62
Career/employment information	18	21	8	53
Information about programs	15	12	3	70
Physical Review Focus	15	10	3	72
Division, Topical Group, Section & Forum Information	14	11	7	68
Physics Central	8	10	5	77
Other	1	2	2	95

**Table S46. Retired Members' Ratings of APS Web information**

	Valuable %	Midpoint %	Not Valuable %	No Opinion %
What's New	24	15	7	54
Meeting Information	20	17	4	59
Member directory	17	23	4	56
Meeting Registration	15	8	2	75
Membership renewal or application	15	9	4	72
APS News	14	19	5	62
Division, Topical Group, Section & Forum Information	15	15	9	61
Journal Information	10	17	4	69
Physical Review Focus	9	8	2	81
Physics Central	3	5	5	87
Information about programs	3	11	7	79
Career/employment information	1	2	6	91
Other	1	-	1	98

**Table S47. How often physicists have accessed APS Web information**

	Access Often %	Accessed Several Times %	Accessed Once %	Never Accessed %
Journal Information	23	40	13	24
What's New	15	22	17	46
Meeting Information	12	51	17	20
Physical Review Focus	10	17	10	63
Career/employment information	7	15	12	66
Meeting Registration	6	23	26	45
Member Directory	6	29	22	43
Division, topical group, section & forum information	5	25	16	54
APS News	4	25	17	54
Membership Renewal or Application	2	10	51	37
Physics Central	2	10	13	75
Information about programs	1	21	19	59
Other	1	1	1	97

**Table S48. How often other scientists have accessed APS Web information**

	Access Often %	Accessed Several Times %	Accessed Once %	Never Accessed %
Journal Information	14	36	17	33
Meeting Information	7	37	28	28
What's New	7	23	19	51
Physical Review Focus	6	9	8	77
Career/employment information	5	8	11	76
Meeting Registration	4	15	23	58
APS News	4	20	18	58
Membership Renewal or Application	2	11	55	32
Member Directory	2	21	29	48
Division, topical group, section & forum information	2	22	18	58
Information about programs	1	19	17	63
Physics Central	1	12	12	75
Other	-	-	2	98

**Table S49. How often students have accessed APS Web information**

	Access Often %	Accessed Several Times %	Accessed Once %	Never Accessed %
Journal Information	31	41	9	19
Meeting Information	18	44	20	18
Meeting Registration	9	26	35	30
What's New	8	23	18	51
Career/employment information	7	25	18	50
Membership Renewal or Application	6	18	58	18
Physical Review Focus	5	18	11	66
Member Directory	4	22	17	57
APS News	3	24	18	55
Information about programs	3	18	21	58
Division, topical group, section & forum information	2	17	19	62
Physics Central	1	12	12	75
Other	1	1	1	97

**Table S50. How often retired members have accessed APS Web information**

	Access Often %	Accessed Several Times %	Accessed Once %	Never Accessed %
What's New	16	22	12	50
Physical Review Focus	12	6	8	74
Journal Information	11	21	13	55
Meeting Information	7	27	20	46
APS News	7	16	20	57
Member Directory	6	24	21	49
Division, topical group, section & forum information	6	20	16	58
Meeting Registration	2	10	15	73
Information about programs	2	10	14	74
Physics Central	2	5	7	86
Membership Renewal or Application	1	3	31	65
Career/employment information	1	2	1	96
Other	2	-	1	97

**Table S51. Member opinions about the APS, by year of survey.**

	1990	1996	2001
	%	%	%
My APS membership dues are reasonable	63	53	60
APS is too academically oriented	29	27	18

Footnote: Respondents were asked to rate their level of agreement with these statements on a scale from 1 to 5, where 1 is “Strongly disagree” and 5 is “Strongly agree”. The columns above represent those who chose 4 or 5.

**Table S52. Member rating the value of APS benefits and service, by type of membership.**

	1990	1996	2001
	%	%	%
Physics Today	87	79	84
APS News		39	58
APS Membership Directory (online)		40	48
APS journals online at reduced cost	50	28	57
Opportunity for you or your students to contribute a paper at APS meetings	55	55	61
Division, topical group, section and forum membership	41	37	40
Low member registration at APS meetings	30	37	42
Fellowship and awards		18	41
APS journals (hard copy) at reduced cost		32	36
APS Membership Directory (hard copy)		48	35

Footnote: Respondents were asked to rate how valuable they found these benefits and services on a scale from 1 to 5, where 1 is “Not at all valuable”, 3 is “Valuable”, and 5 is “Extremely Valuable”. The columns above represent those who chose 4 or 5.

**Table S53. Member rating the value of APS benefits and service, by type of membership.**

	Female	Male
	%	%
Online APS meetings information	94	85
APS Membership Directory (online)	89	78
Opportunity for you or your students to contribute a paper at APS meetings	86	78
Low member registration at APS meetings	86	68
APS Membership Directory (hard copy)	65	54

Footnote: Respondents were asked to rate how valuable they found these benefits and services on a scale from 1 to 5, where 1 is “Not at all valuable”, 3 is “Valuable”, and 5 is “Extremely Valuable”. The columns above represent those who chose 3, 4 or 5.

**Table S54. Member awareness about APS programs, by type of membership.**

	Female	Male
	%	%
Time Line Wall Chart	75	64
Speakers lists of Women and Minorities in Physics	68	34
Physics Central	41	34
Speakers lists of Industrial and Applied Physicists	47	31
High School Teachers’ Days at APS meetings	51	40

Footnote: Respondents were asked to rate their knowledge or awareness of the above programs and activities on a scale from 1 to 5, where 1 is “Never heard of program”, 3 is “Heard of program”, and 5 is “Know it very well”. The above columns represent those who chose 3, 4 or 5



*Appendix: Cover letter and Questionnaire*

## *Appendix: Comments Summary*

Verbatim Comments in Response to  
*If there were a single improvement you would like to see  
with the APS online journal service, what would it be?*

2001 APS Membership Survey

Over 240 respondents wrote one or more comments in response to the above question. We categorized these into 7 major themes:

1. **Coverage.** Nearly half of all respondents reported that they would like to see an expansion in the coverage of the online journal service.
  - ▶ Most of these encouraged the APS to “continue with the effort to make old volumes accessible”.
  - ▶ Many wanted the online archive to including all issues ever printed.
  - ▶ A few suggested links to other journals or online databases such as:
    - online bibliographic databases,
    - improved citation cross-referencing,
    - more virtual journals,
    - better interface between SciSearch and the APS online journals, and
    - hypertext links to referenced articles.
  
2. **Access.** About 70 members raised concerns related to access, the second most common

category. These included comments about transfer speed, server problems, passwords, and fee structure. Several respondents complained about the password verification procedures, in general, and how institutional accounts create additional problems for access to research literature from off-campus locations.

- ▶ The site is usually very slow and sometimes I can't access it.
- ▶ I seem to need things when the system is down or experiencing trouble more frequently than I would like.
  - ▶ The process whereby the browser identifies an allowed user does not work well.
- ▶ As I don't subscribe to any journals, I must use the institutional access, which means that I must be in my office on campus to use the service.
- ▶ I do not belong to a university. Therefore in order to have access, I have to pay high fees. My suggestion, remove the fees at least for members.
- ▶ Make it inexpensive enough so that smaller schools like mine can afford PROLA.
- ▶ It would be good to have a single member subscription price for complete access to online journals.
- ▶ Free for all APS members

**3. Search functions.** Over 40 members wrote comments that focused on requests to speed up the system, suggestions for broadening the search options, and a few complaints about apparent bugs in the search functions.

- ▶ If you can, find a way to better encode the pdf files for PROLA. They are sometimes extremely large and they take a very long time to print.
- ▶ Improved searching capabilities - sometimes search engine does not find searched authors.
- ▶ Subject search capability.
- ▶ More flexible query options including use of sql syntax.
- ▶ Faster page openings and downloads.

**4. Format.** Over 20 members wrote suggestions for alternative formats such as postscript, html, BibText or raised concerns about the size of pdf files.

- ▶ Smaller pdf files.
- ▶ Articles in postscript as well as pdf.
- ▶ Distribution of articles in multiple formats, e.g. postscript, pdf, latex, etc.
- ▶ Access to author info in BibTex format.

**5. Personalized online services.** 20 respondents requested personalized services, most of which focused on email notification about the latest posting of research articles whose subjects or authors were of particular interest. A few asked for personalized sections of the APS web site and requested easier methods of downloading articles of interest to local sites.

**6. Appearance and design.** Over a dozen respondents mentioned concerns about layout and readability. Many of these focused on the readability on a computer screen of older, scanned articles. A few thought that the web page could be laid out somewhat better.

**7. Other comments.** These included a dozen positive comments about the online journal service, 18 members who wrote in “no comment” and 17 miscellaneous suggestions.

Verbatim Comments in Response to  
*Any additional comments regarding the American Physical Society?*  
2001 APS Membership Survey

Over 350 respondents wrote comments in response to the above question. We categorized these into the following eight major themes:

**1. APS Activities and Programs.** About 20% of all respondents commented on APS activities and programs. The two main themes of these comments are increasing industrial orientation and fostering ties to other disciplines. Many members also requested an increased focus on education and career issues.

- ▶ The APS could be more active in helping to establish links between academe and industry, so as to increase the flow of students from high school through university to industry.
- ▶ APS is an excellent organization. As I am in industry (lighting), it would be nice to see more conferences that combine both academic and industrial interests.
- ▶ Further efforts by the APS to recognize the interrelationship between physics and other disciplines will enhance the perceived value of the physics courses as well as the reputation of the physics major in industry. The result will be not just higher

enrollments, but also better job prospects for physicists at all degree levels.

- ▶ The APS should take a serious look at the possibility of accreditation of physics departments in the US. The American Chemical Society already does this, and it has helped many departments.
- ▶ Much more needs to be done to inform the public about the crucial importance of basic research in the physical sciences.

**2. Positive Comments.** The second most common response was a positive comment about APS. Many responded, “Keep up the good work!” as well as “I enjoy my membership in APS.” Other complimentary comments include:

- ▶ APS does a good job of meeting needs of a wide range of professional skills in the public and private sectors of the USA physics community.  
Keep it up!
- ▶ Keep leading the way in online, refereed journal development.
- ▶ I support the APS for the direct member benefits, the community activities, and support of “bringing the importance of physics to the general public”. It is an excellent organization, really the world’s most respected physics association.

**3. Public Policies and Government Relations.** The third most common type of comment regards the role of APS in public policy and members expressed strong opinions on opposite sides of the issue. About 40% of respondents suggested that APS expand its role in lobbying efforts, primarily for increased funding and research. Slightly more requested that APS remain focused on science and stay out of governmental matters altogether.

- ▶ We need a stronger and more vocal lobby, both in Washington and in the media.
- ▶ I think APS could do a much better job lobbying for increased research funding.
- ▶ No matter how I, as an individual, might agree with their statements, the APS executive committee has no right to speak for me on political issues such as nuclear weaponry, global warming, teaching evolution in Kansas and so on.
- ▶ I think the APS's lobbying for public funds runs the risk of reducing physics to just another pig trying to squeeze in at the public trough.

**4. Meetings.** The majority of the comments in this category suggested improving organization of meetings and sessions. Additionally, some respondents requested lower costs of attendance and that APS hold meetings in less expensive locations.

**5. Website/Online Journals.** Comments here included requests to continue email notification. A few respondents also noted that they would find a yearly CD-ROM archive of journals very useful.

**6. Membership.** Reduced fees and journal costs were the most popular response in this category.

**7. Survey-Specific Comments.** Comments regarding the survey itself included complaints about the length of the survey and suggestions on its design.

**8. Miscellaneous Comments.** This category includes those who answered that they are no longer working in the field of physics, those who are retired, as well as other suggestions not covered by the above categories. Some of the miscellaneous comments are:

- ▶ Stop selling insurance and other non-physics things.
- ▶ It would be nice to have a more substantial support for women in the physics community.
- ▶ Bob Park doesn't get it.

Verbatim Comments in Response to

*If you could add one additional resource to the APS web site, or improve one of the existing resources, what would it be?*

2001 APS Membership Survey

Over 175 respondents wrote comments in response to the above question. We categorized these into the following six major themes:

**1. Online Content.** About 40% of the respondents would like to see content changes or additions to the web site. Most commonly mentioned were links to other, non-APS-related organizations and journals. The requests included:

- ▶ Comprehensive links to all on-line physics (and related) journals, of all publishers, and to principal physics web sites.
- ▶ Cross-links with European and Asian Physical societies, at every relevant level.
- ▶ More coverage of physics news in general rather than just APS-related.
- ▶ Useful physics data (constants, periodic table, standards, etc...)
- ▶ APS should keep a www resource with an archive of educational software ... with things like: arithmetic programs, planetary orbit programs, 2 body collisions, (with graphics,) with ability to let users change parameters and get physical insight without looking at differential equations. A lot of people learn that way before getting the math knowledge.
- ▶ Description of applications of physics to industrial use, for the purpose of helping high school students and counselors to appreciate the importance physics and the availability of employment. A new website on this was recently introduced, but I think more explicit information should be included.

**2. Employment and Networking Resources.** Over half of the comments regarding employment listings requested expanded and better-organized listings, particularly for the Bachelor's and Master's level. Other suggestions included:

- ▶ Organize by appointment type (postdoc vs. faculty) and by subfield.
- ▶ Split employment listings into more categories.... The industrial positions could be split into different headings by desired physics specialty (optics, laser physics, thin films, etc.) or by type of employer. These would make it easier to home in on the type of position being sought, instead of having to track down each one of them as it is arranged

currently.

- ▶ Maybe a site to help new assistant professors – give them ways of networking and finding resources.
- ▶ Create a bulletin board or email listserver, for APS members to post our own views on issues of concern to APS.

**3. Technical Issues.** Again, popular responses included requests for cheaper or free access to the web site, improved search functions and complaints about passwords and speed. These comments are summarized in more depth in the verbatim comments for the earlier question.

**4. Meetings.** A few respondents mentioned they'd like to see improved online registration and meetings information.

- ▶ Post information of APS meeting programs earlier – as of now the information is posted long after the program is set and so late as to not be useful in planning attendance.
- ▶ Meeting calendar for entire year (graphical) with links to meeting announcement pages.

**5. Journal Submissions.** Some respondents focussed on resources for paper submission including tracking the status of submitted articles and searching for forthcoming articles. Additionally, one respondent wrote:

- ▶ It would be the inclusion of a standard RevTex template accessible by

anyone who wishes to submit a manuscript to any APS journal electronically. (If this already exists, I haven't been able to find it – only a barebones outline.)

**6. Other Comments.** There were various other comments including “I don't know” as well as positive remarks. A few interesting suggestions are:

- ▶ Web broadcast of APS conferences, including plenary talks. See for example how we did it for SC2000 (and the SC'XY supercomputing series in general.)
- ▶ Bulleted list of current major funding opportunities with deadline and link to full information.
- ▶ Provide link to physics-related activities in Congress (bills under consideration, current members of science subcommittees, APS science policy statements related to Congressional activity.)