Jack Wilson called the meeting to order at 10:30 am. The original agenda (attachment 7) was modified to accommodate reports from those who could be present only for a portion of the meeting.

Minutes of the November 3, 2001 Executive Committee Meeting (conference call) were approved.

**Kagan: Election Results** (attachment 1)

- **Vice Chair:** Gay Stewart
- **Secretary-Treasurer:** Ernest Malamud
- **APS-AAPT Member-at-Large:** Karen Cummings
- **General Member-at-Large:** Robert Ehrlich

There were 410 eballots (administered by Ken Lyons) and 30 paper ballots for a total of 440 ballots. This is 10.1% of our membership. Paper ballots were sent to 164 FEd members who have no email address.

**Kagan: Membership Report** (attachment 1)

Based on the "Official FY 2001 Unit Membership Statistics" source, the FEd membership was 4,092, nearly 10% of the total APS membership. (more details in the attachment). Ken Krane pointed out that the APS could help us increase the FEd membership. One suggestion is to “market” a list of APS members with .edu email addresses who are not already members of two fora. Before proceeding we need to develop a marketing “pitch.” (Ken)

**Kagan: Treasurers Report** (attachment 1)

**Lubell: Report from Washington**

Mike summarized the 15 months since the Bush Administration took over. Mike’s report stimulated a long discussion on a number of issues: retention of physics majors is poor despite an increase in the number of HS students taking physics, differences in retention between large research universities and primarily teaching universities, graduate students and the large proportion who are foreign students, and the lack of curriculum revisions (cf. other fields of science) to capture some of the excitement of current physics research.

Ken Krane asked if the FEd could mobilize its membership to avoid the disaster of the FY02 budget. Mike pointed out that it was too late to influence the FY03 budget, but that now is the time for input to the FY04 budget. **Action Item:** It is useful for people to meet with staff of OMB, NSF, Department of Education. The APS Washington Office can help arrange such visits. Public policy is more than just getting more money. It is also influencing how
that money can be used. One must be proactive. E.g. what would an education analogy be to the “nanotechnology initiative?”

**Karsten Heeger – Report from FGSA**

Karsten reported on the status of the newly formed FGSA. There are 600 members. During their first year they have had joint sessions with the FEd. Top issues for the FGSA are graduate students feeling isolated at individual institutions and the need for gaining a perspective of career possibilities (more than just what they get from their advisors).

**Tom McIlrath – APS Report**

**William Brinkman – APS Report**

**Judy Franz – APS Report**

Judy summarized joint APS and AAPT activities: PhysTEC, New Faculty Workshop, a June meeting on Education. She discussed the decline in the numbers of physics B.A.’s and the proportion of foreign to American students. She does not want the APS/FEd to be the same as AAPT; it needs to be complimentary. The charge to the FEd is to find ways to get APS members involved – not just concerned, but active.

**Pete Zimmerman – Councilors Report**

Pete reported on the Council Meeting held April 19. His report covered APS finances, federal funding for physics, APS prizes and awards.

**Fred Stein – APS Education and Outreach Programs Report**

Fred discussed the APS Teachers’ Day, activities of APS standing committees, the National Science Digital Library and the status of the successful PhysTEC program, now nearing the end of its first year, and the largest externally funded APS project.

**Jim Wynne – Mass Media Fellowship Program (on FEd website)**

**Jim Wynne -- Website Report (attachment 2)**

**Discussion.** Mort reported that Ken Lyons is reluctantly continuing to do the electronic balloting and the member survey. Ernie will ask if the APS can take this over.

**Stan Jones – Newsletter Report (attachment 3)**

**Discussion and action items:** We discussed a market survey to see who is reading the newsletter. Opinion was divided on whether or not this would give us the desired information. Perhaps APS can do a survey for us. (Ernie).

A motion was passed to send a copy of the Spring02 newsletter to Physics Departments (about 800) and the Ntl Lab Libraries together with an appropriate cover letter. (Ernie and Ken)

The URL will be added to the masthead. More “meta” words to the html header and the URL submitted to search engines (e.g. Google) to try and generate more hits. (Ken)

Prepare a Table of Contents to distribute at APS meetings (Ken).

Get a piece on education into the annual APS News Highlights. (audience is science communicators). (Wolfgang).

Calendar of future conferences on education. (Ken). On the FEd web page and also in our newsletters.
Ken Krane – Committee on Education (attachment 4)

The APS Education Award was discussed. *Action item:* read over the proposed award definition (in attachment 4), suggest changes, and try and make a list of people who would have received this award over the last 30 years if it had been in existence (and compare with the AAPT award list).

*Action item:* licensure (see item 4 in attachment 4).

There was discussion on the need to define AP and the function of the AP exam(s).

Accreditation is now “off the table” since no one wants to pursue it.

There was much discussion of Physics First and it was agreed that we should pursue having an FEd “Physics First” Plenary Session at an APS meeting with Lederman as one of the speakers.

Ken Krane – FEd/APS meeting programs (attachment 5)

Program Suggestions for 2003 Meetings. (Send suggestions for sessions to Wolfgang)

- March 3-7, 2003 Austin, TX
- April 5-8, 2003, Philadelphia, PA

- Physics First Plenary Session (see COE report)
- “Teaching Quantum Mechanics” at both March and April Meetings.
- Joint session with FGSA at March meeting (similar to the one this year at the April meeting).
- Physics demonstration session (some speakers could be from Science & Technology Centers)
- Session on open source software
- note added by E.M. There was a general feeling that the Physics Education Open House was a big success and should be repeated in 2003.

Fellowship Report. *Congratulations to new 2001 APS Fellows.* Selected by the FEd Fellowship Committee and elected to fellowship in the APS.

- Ashok Puri, University of New Orleans
- Randal Charles Ruchti, University of Notre Dame
- Paul William Zitzewitz, University of Michigan-Dearborn

John L. Hubisz – AAPT Report (attachment 6)

At the conclusion of the Executive Committee meeting Jack Wilson ceremoniously handed the gavel to Ken Krane, our new Chair.

FEd Business Meeting

Ken Krane, the new FEd Chair, convened the business meeting at 5:30 p.m. at the conclusion of the Physics Education Open House. Mort Kagan presented APS Fellowship certificates and medals to our 3 new APS fellows. The new FEd officers were introduced. Ken reviewed some of the highlights of the previous FEd Executive Committee meeting.
## Agenda topics

<table>
<thead>
<tr>
<th>Topic</th>
<th>Presenter</th>
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<tr>
<td>Meeting called to order</td>
<td>Wilson</td>
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<td>Approval of November 3, 2001 minutes</td>
<td>Kagan</td>
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<tr>
<td>Treasurers, Membership, and Election Reports</td>
<td>Kagan</td>
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<td>Committee on Education (COE) Report</td>
<td>Saenz</td>
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<td>Councillors Report</td>
<td>Zimmerman</td>
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<td>Mass Media and Website Reports</td>
<td>Wynne</td>
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<td>Newsletter status Report and discussion</td>
<td>Jones/Malamud/Rossing</td>
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<tr>
<td>General APS Report &amp; announcements</td>
<td>Franz</td>
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<tr>
<td>APS Education &amp; Outreach Programs Report</td>
<td>Stein</td>
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<tr>
<td>National Task Force on Undergraduate Physics Education Report</td>
<td>Krane</td>
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<td>FEd/APS meeting programs</td>
<td>Krane</td>
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<td>Fellowship Committee Report</td>
<td>Heller</td>
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<td>Old/New business</td>
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<td>Passing of the Gavel</td>
<td>Wilson to Krane</td>
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<td>Meeting Adjournment</td>
<td>Krane</td>
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Attachment 2 (to minutes of the April 21, 2002 FEd Executive Committee Meeting)

FEd Website Report – 4/15/02
James J. Wynne
FEd Webmaster

Here are some usage statistics provided by Joanne Fincham of the APS.

The Spring 2002 newsletter and the Executive Committee election were announced on March 5 by email to FEd members. This resulted in a significantly increased number of “hits” in March as compared to February.

March stats:

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February stats:

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Note: The APS is using a new statistics engine, which counts web page “hits” differently. The old statistics engine gave much larger counts, due to some multiple counting of frames and images. For comparison with my previous website report on 11/1/01, I present statistics determined by the old statistics engine.

March stats:

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</table>

The only email I receive about the FEd website if from people who want me to provide links to their websites.

With the FEd executive committee’s blessing, I plan to use the FEd web site to “publish” selected hands-on science activities suitable for 4th and 5th grade. These activities will be provided by Lewis Love, who wrote the article “Physics in Elementary School” that was published in our Spring 2001 FEd newsletter - http://www.aps.org/units/fed/spring2001/love.html.
Attachment 3 (to minutes of the April 21, 2002 FEd Executive Committee Meeting)

Newsletter Editors’ Report

1. Having completed the first year of on-line publication of the newsletter, the three co-editors held a conference call in January to discuss standardization of the format and process. We agreed upon a standard format, which includes the following features:
   - We will continue to provide both html and pdf files for the readers.
   - The pdf files will have the standard header, and will have running headers on each page, to identify the newsletter.
   - We will use 2-column format for the pdf version. (pdf files for individual articles will be single column).
   - We'll stick to articles of length roughly 1000-1500 words maximum length.
   - We'll aim for 10-15 articles per issue.
   - A few other details about style and procedures were discussed; these would bore you all.

2. The numbers listed above come from an analysis of recent issues. Moving to electronic publishing freed us from limitations due to budget, and resulted in significant variations in article length and newsletter length. We are trying to return to something more like the paper versions, in terms of length, in order to have a more readable newsletter.

3. We still get very few letters to the editor. Is that because we are not controversial enough? It is true, of course, that many of our topics are not controversial. But beyond letters, we also get few contributed articles; most are solicited by us. We will continue to work within this reality, and appreciate the contributions that some of you have solicited on our behalf.

4. Suggestions for themes for future newsletter issues are always welcome. Not every issue does have a theme.
Attachment 4  (to minutes of the April 21, 2002 FEd Executive Committee Meeting)

COE Report – Krane

1. Physics Education Award -- this went from FEd to COE. Ken Heller prepared a draft of the award statement for COE. Need to flesh out the statement. It will be submitted by COE to the Council.

   Draft submitted by Ken Heller (October 2001)

   APS Education Award

   The APS Award recognizes individuals with distinguished records of impacting education on the national level while also engaging in research that significantly adds to the fundamental understanding of the physical world. This award recognizes the culture in Physics that values members of our community who work at both the frontiers of our understanding of the physical world and the equally important frontier of communicating physics to future generations through this country’s educational system. The purpose of the award is to recognize the traditional connection between those who bring the same effort, insight, and rigor to the education of undergraduates, teachers, or K-12 students that characterizes their investigations of the physical world.

2. Digital Library -- a proposal submission to NSF is imminent on behalf of APS, AAPT, and AIP.

3. AP Exam -- we heard a presentation from Jerry Gollub about the current situation regarding the AP physics exam and AP exams in general. He chaired a subcommittee for NRC to look into the exam and has written an article for the May issue of Physics Today. A very large number of people take this exam. It is applied very non-uniformly.

4. State Licensure -- we need to activate a cadre of informed folks in each state to gather information about the schedule for changing K-12 licensure requirements. The FEd database should suffice for this purpose. Pick 3-4 states where this is imminent. COE will use the FEd database. (Ken will contact Ted Hoddap)

5. Federal Funding for Education -- Mike Lubell presented some information about current and pending federal legislation for education support. We need to mobilize to prevent a repeat of the disaster with the FY2002 bill.

6. Task Force sponsored by AIP/APS/AAPT and funded by Exxon. Has conducted 20 site visits to “thriving” physics departments. These were chosen for awarding a significant number of degrees above the national average in the category for that school. Case studies are on a website. A survey of 2-year colleges is now funded and underway.

7. Workshop with Kaleidoscope on “becoming an agent of change.”
Attachment 5 (to minutes of the April 21, 2002 FEd Executive Committee Meeting)

The Forum on Education will sponsor the following sessions at the March and April APS meetings:

March Meeting (Indianapolis, March 18-22, 2002):

**Teaching Thermal and Statistical Physics.** Monday 08:00.

- Computer simulations as concrete models for student reasoning. Jan Tobochnik, Kalamazoo College.
- Student Understanding of The First Law of Thermodynamics. Michael Loverude, California State University - Fullerton.

**Society of Physics Students Session I/Education and Career Development.** (Co-sponsored with SPS). Monday 11:00.


- Successful Strategies for Empowering Students to Get High Paying and Rewarding Employment in Industry (and elsewhere). Brian Schwartz, CUNY.
- Integration of a full co-op job experience (and direct job-placement) with an applied physics curriculum. Daniel Russell, Kettering University.
- How Undergraduate Physics Departments View Career Education. Ruth Howes, Ball State University.
- Discussion.

**Panel Discussion: Communicating with Elected Officials.** (Co-sponsored with FPS). Tuesday 08:00.

- Michael Lubell, APS and CCNY (moderator).

April Meeting (Albuquerque, April 20-23).

**Innovative Approaches to High School Teacher Development.** Saturday 10:45.

- The PhysTEC Project of APS, AIP, and AAPT. Henri Jansen, Oregon State University.
- Teaching Physics Online from the University to the Schools. Karen Cummings, RPI.

**How to Find and Hold a Faculty Job.** (Co-sponsored with FGSA). Saturday 14:30.

- Faculty Career Opportunities in Liberal Arts Colleges. Neal B. Abraham, DePauw University.
- Faculty Hiring and Development at BYU: Perspectives of a Recent Hire and Department Chair. R. Steven Turley, Brigham Young University.
- Progressing Towards Tenure. Elizabeth H. Simmons, Boston University.
- Things I Wish They Had Told Me: Advice From a Newly Tenured Faculty Member From a Small, Liberal Arts College. Peter Sheldon, Randolph-Macon Woman's College.


Panel Discussion.

Improving Physics Graduate Education: Some Case Studies. (Co-sponsored with FGSA). Monday 10:45.


Real Outreach for Real Proposals. (Co-sponsored with DPF.) Monday 14:30.


Physics Education Open House. Monday 17:00.

This is a new type of program that will enable meeting participants to drop in, have some refreshments, and engage in informal discussions of important topics in physics education. Discussions will be organized around the following topics:

- introductory physics for engineers and pre-meds
- teaching non-science students
- outreach to K-12 teachers and students
- recruitment and retention of majors
- preparation of K-12 teachers
- innovation in upper-division classes.

There were two Contributed Paper sessions (16 papers).
New Grant to Improve the Preparation of Physics Teachers

The American Physical Society (APS), the American Association of Physics Teachers (AAPT), and the American Institute of Physics (AIP) have received grants from the National Science Foundation (NSF) and the Fund for the Improvement of Post Secondary Education (FIPSE) for a program to improve the preparation of K-12 physics and physical science teachers. For more information on the PhysTEC project visit http://www.aapt.org/programs/phystec/announce.html.

A new AAPT committee on the preparation of teachers at all levels under the chairmanship of Leonard Jossem Jossem@mps.ohio-state.edu of the Ohio State University has been formed.

The Texas Section of the AAPT sponsored a meeting on teacher preparation in Texas prior to the regular Spring Meeting in Nacogdoches. Along with 40 invitees from Texas there were 10 nationally active AAPT and APS invited. A report is in the works for national distribution. Contact Mary Beth Monroe at mbmonroe@swtjc.swtjc.cc.tx.us one of the organizers for more immediate information.

New Web Site for Students Planning Graduate Study in Physics

As a service to our members, AAPT has established a website designed to be a searchable online directory for researching graduate programs in the physical sciences, engineering and related fields. The site also provides other useful resources for students and academics. For more information go to www.gradschoolshopper.com. The AAPT pamphlet “Planning for Graduate Studies in Physics and Related Fields” has been updated and is ready for publication.

Physics Education Research After a three year “experiment” with the publication of an annual physics education research supplement (PERS) to the American Journal of Physics, the AAPT Executive Board has approved the inclusion of a PER Section within AJP. The AJP Editor, Jan Tobochnik, is working with the PERS editor Joe Redish to implement this decision and to involve other members of the PER community in plans for the continued support of this important research area in physics.

Physics First In Philadelphia, our meeting included a major session, facilitated in large part by Barry Feierman bfeier@aol.com on “Physics First!” and the experiences of a group of teachers who have implemented such a curriculum in their schools. “Physics First!” is a general term applied to any of a variety of efforts to teach physics in the first year of high school or even earlier. Such an arrangement often requires the identification of teachers of other sciences who begin to teach physics, perhaps for the first time. Other issues involve the selection of an appropriate textbook, the articulation with math requirements, the likely impact on subsequent courses in chemistry and biology, and the expectation that some students may also elect to take a “traditional” physics course in the twelfth grade.

PTRA- Rural The Physics Teacher Resource Agent (PTRA) program has been organized and sponsored by AAPT for fifteen years. The names of Jim Nelson (recently elected vice-president), Larry Badar (long-time section representative), and Robert Beck Clark (former president and treasurer) immediately come to mind. It has expanded to include centers in about 20 urban areas. AAPT has submitted a proposal to NSF to expand further this successful program into rural areas, which are typically very under served in professional development opportunities. Here Jan Mader and George Amann join them. As a prototype effort, AAPT allocated Campaign for Physics funds to support three demonstration rural activities based at Coastal Carolina University, South Dakota State University and Illinois State University. The three prototypes were very successful, in each case meeting their objectives for attracting participating teachers to the weeklong series of workshops.

New Faculty Workshops In mid-November, AAPT, in cooperation with APS and the American Astronomical Society, held the sixth annual workshop for new faculty. This is the first workshop that paid specific attention to the
special needs of astronomy faculty. About 55 physics and 10 astronomy faculty participated in this workshop held at the American Center for Physics. Ken Krane was responsible for much of this work. AAPT has submitted a proposal to NSF seeking support for these workshops for an additional period of five years.

**National Task Force on Undergraduate Physics** The National Task Force, jointly sponsored and appointed by AAPT, APS, and AIP, has initiated several projects. Our own former presidents, Bob Hilborn and Ruth Howes rhowes@bsu.edu, are intimately involved in this project. With support from the Exxon Mobil Foundation, a series of departmental site visits and surveys will collect information about the state of undergraduate education in physics. A national report will seek to identify the kinds of departmental traits and behaviors associated with active and successful undergraduate programs. A proposal to conduct a parallel study among some two-year colleges has been submitted to NSF. The Task Force, under the initiative of Carl Wieman, Nobel Laureate, convened a meeting of department chairs from the 25 “top” research departments to discuss the status of undergraduate programs at their institutions.

Plans are also underway to hold a conference in the fall of this year to bring together departments to examine the “introductory calculus based physics course.”

**National Science Digital Library** AAPT along with APS, AIP and AAS are planning to develop a proposal for a physics component to be embedded in the broader national effort to develop a science digital library. AAPT’s Physical Science Resource Center http://www.psrc-online.org is a current effort around which the new proposal may seek refinement and expansion. Having laid the groundwork, Bruce Mason, Warren Hein, and others are meeting here in Philadelphia and welcome other interested individuals. It is efforts such as this, involving the APS, AAPT, and AIP, that illustrate the wisdom of our move years ago to build the American Center for Physics.

**International Physics Olympiad** On behalf of the entire physics community, including financial support from APS and the other AIP member societies, AAPT organizes the US Physics Team that represents our nation in the International Physics Olympiad. Coaches Mary Mogge and Leaf Turner are to be commended for the team’s excellent training. In 2001, the competition was held in Turkey, where the five US Team representatives garnered three gold medals and two silver medals; in informal rankings, the US was third behind China and Russia.

The 2002 Olympiad is scheduled to be held in July 2002 in Indonesia. The site in Indonesia has been changed, but our concerns have not changed. Because of these concerns about international security, it is possible that we will not ask our students to travel to Indonesia. In light of this uncertainty, AAPT is planning to identify a team and a training camp, as we have done in previous years, and are hoping to put in place an alternative plan for recognizing and rewarding the team members in case international concerns (and the explicit advice of the US State Department) preclude our travel to Indonesia. Overwhelmingly, parents of our invitees to the camp are relieved.

**The Two-Year College Initiative** The TYC initiative with respect to offering a TYC version of Powerful Ideas in Physical Science has not been funded, but we have not given up.

**Proposed New Award in Education by the APS** AAPT is a bit concerned that this award will be in competition with the Millikan and especially the Oersted that the AAPT awards annually. We recognize that there are AAPT members in the Forum’s leadership and hope that they suggest ways in which the emphasis differs or perhaps encourage some arrangement that makes the award a joint venture wherein the recipient presents a similar talk at an AAPT annual meeting.
Attachment 1 (to minutes of the April 21, 2002 FEd Executive Committee Meeting)

Treasurers, Membership, and Election Results Reports--Kagan

This report is based on the 8 Months Ended 02//28/02 APS Financial Statement.

Total Net Assets: According to this Financial Statement, our total net assets are $20,999.46. This should be compared to total assets of $7,900.04 last year and a total asset (loss) of $9,714.14 two years ago. These differences are mainly attributable to the APS's forgiveness for our previous debts. Also, major contributing factors are the new and more generous formula regarding the amount of funds being made available to the FEd (and all of the other units) from the APS, and the substitution of virtual or home based meetings as opposed to live meetings. Making available our newsletter distribution via the Internet is another major contributor to the present solvency of the FEd. For example newsletter savings costs were $3,427.61 from a year ago and $3,482.57 two years ago.

Expenses: The only expenses incurred since our last treasurer’s report of November 3, 2001 was due to the sorters travelers’ cost of $825.49 for a total expense to date of $985.49. This is to be compared with a total expense of $7,483.96 last year and $9,720.60 two years ago. In addition to building up this financial reserve fund, the FEd might wish to reconsider holding but one live meeting per year.

Based on the "Official FY 2001 Unit Membership Statistics" source, the FEd membership was 4,092. This represents 9.84% of the total APS membership of 41,570. This retains the FEd as the fourth largest (of the 35 units) unit of the APS. FIAP remains the largest unit with 5,293 members (12.73%), followed by DCMP with 5,091 (12.25%), and FPS with 4,496 members (10.82%). Four of the top five largest APS units are still Fora.

The winners of this year’s election are as follows:

Vice Chair: Gay Stewart
Secretary-Treasurer: Ernest Malamud
APS-AAPT Member-at-Large: Karen Cummings
General Member-at-Large: Robert Ehrlich