

# DPF Newsletter - February 2001

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The DPF newsletter is published roughly three times a year. Contributions are welcome. Send them to the Editor.

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## DPF Elections

Jonathan Bagger was elected Vice-Chair of DPF in this year's election. Nick Hadley was elected Secretary-Treasurer. The new Executive Committee members are Marty Breidenebach and Young-Kee Kim.

The members of the 2001 DPF Executive Committee and the final years of their terms are

**Chair:** Chris Quigg (2001).

**Chair-Elect:** Stanley Wojcicki (2001).

**Vice-Chair:** Jonathan Bagger (2001).

**Past Chair:** Eugene Beier (2001)

**Secretary-Treasurer:** Nick Hadley (2003).

**Division Councilor:** Sally Dawson (2002),  
Peter Meyers(2003).

**Executive Committee Members:** Vernon Barger (2001), Bill Carithers (2002), Janet Conrad (2002), Glennys Farrar (2001), Marty Breidenebach (2003), and Young-Kee Kim (2003).

We would like to take this opportunity to thank DPF Executive Committee members whose terms are expiring in 2000: Howard Gordon (Past Chair), Cathy Newman-Holmes (Secretary-Treasurer) and Nick Hadley and Donna Naples (Executive Committee members). Nick Hadley will continue on the Executive Committee as DPF Secretary-Treasurer. We also express our appreciation to all who agreed to run for DPF office this year. We were fortunate to have an excellent slate of candidates.

## **What Does DPF Do? What Should DPF Be Doing?**

It is important for any organization to take time periodically to consider how well it is responding to the needs of its community and to opportunities for creative service to its members and beyond. The Executive Committee of the DPF has charged a subcommittee of Vernon Barger, Bill Carithers (chair), Janet Conrad, and Glennys Farrar to examine both the mission and organizational structure of the Division of Particles and Fields. They will consider, in the context of other institutions in our community, whether the DPF is doing all it could, as well as it should, to advance the science of particle physics. Members of the subcommittee welcome your comments and suggestions. The subcommittee's report is due in final form by the end of 2001.

## **Meetings**

The April meeting of the American Physical Society will be held in Washington DC from April 28- May 1, 2000. The DPF Executive Committee urges you to attend this meeting since the DPF will have a significant presence there, and Washington is at its best in the Spring. In addition to the contributed sessions, there will be 8 DPF sponsored or co-sponsored invited paper sessions. The topics of those sessions are: High Energy Cosmic Rays (joint with Division of Astrophysics), B Physics and CP Violation, Future Accelerators (joint with Division of Physics of Beams), Neutrino Physics (joint with Division of Nuclear Physics), Standard Model and Beyond, New Ideas in Theory, Prize session (Panofsky, Sakurai, Wilson prize recipients - joint with DPB) and Quantum Chromodynamics (joint with DNP).

DPF 2002 will be held on the campus of the College of William and Mary in Williamsburg, Virginia, May 24-28, 2002. Details will appear on the conference web site, <http://www.dpf2002.org>. The 2002 APS meeting will take place in Albuquerque, New Mexico, April 20-23, 2002.

In 2003, the DPF will hold its divisional meeting in Philadelphia, in conjunction with the American Physical Society April Meeting, April 5 - 8, 2003. We have agreed to join the DPF Meeting to the APS April Meeting in odd-numbered years, to enhance communication with DAP and DNP.

In 2004, the APS April meeting will be in Denver, May 1-4.

The Executive Committee is seeking offers to host the 2004 DPF Meeting, preferably during the late summer or early fall, and in the west. If your institution is interested in making a bid, please contact Chris Quigg ([quigg@fnal.gov](mailto:quigg@fnal.gov)) or Nick Hadley ([njhadley@physics.umd.edu](mailto:njhadley@physics.umd.edu)). We would like to receive expressions of interest by April 15, 2001.

The International Europhysics Conference on High Energy Physics will be held on July 12-18, 2001, in Budapest, Hungary. There is no quota on delegates from any country.

## **Snowmass News**

The high-energy physics community in the United States has gathered at intervals since 1982 to examine and articulate the current state of the discipline and to chart its future. This year, the APS Divisions of Particles and Fields and of the Physics of Beams are organizing a Summer Study on the Future of Particle Physics that will consider the field in all its richness and diversity. Snowmass 2001 will consider experiments at the highest energies, experiments of exceptional sensitivity, and experiments that explore very high scales through virtual effects; accelerators to address a broad range of scientific opportunities; accelerator research to provide information for knowledgeable decisions about future projects, and accelerator research and technology development for the long term; theory that develops hand-in-hand with experiment and visionary theory that hasn't yet engaged experimental particle physics directly. The workshop will examine accelerator experiments as well as astroparticle, particle astrophysics, and cosmological studies that use natural sources. It will examine the interplay between particle physics and new technologies, and will explore the interactions between particle physics and related fields.

Snowmass 2001 will be a forum for the critical examination of future projects, and will provide crucial community input to the long-range planning activities undertaken by the science funding agencies and the High Energy Physics Advisory Panel. It will be an ideal place for a broad community of scientists to examine initiatives for new accelerators and new detectors that are being developed throughout the world.

Every member of the high-energy physics community is welcome. We look forward to extensive international participation.

For a more detailed description of plans for Snowmass 2001, visit <http://snowmass2001.org> regularly.

## **DPF Begins Drive to Increase Panofsky Prize Fund**

The American Physical Society's Panofsky Prize was established in 1985 by the Friends of W.K.H. Panofsky and the Division of Particles and Fields "to recognize and encourage outstanding achievements in Experimental Particle Physics." A prize has been awarded each year since 1988.

The DPF is commencing a drive to increase the endowment in the Panofsky Prize Fund with two goals: to make the prize a permanent prize of the American Physical Society, and to increase the award to account for inflation. Our target is to raise \$100,000 for the fund.

At this early date, generous donations and pledges from the operators of accelerator laboratories have reached a total of forty per cent of the target. We are now in a position to reach out to other institutions and individuals that have had a strong association with the field of elementary particle physics, with the Stanford Linear Accelerator Center, or

with Professor Panofsky, and to the membership of the Division of Particles and Fields.

Professor "Pief" Panofsky has had a long and distinguished career as a teacher, scientist, administrator, and government advisor. As Director of the Stanford Linear Accelerator Center from 1961 to 1984, he laid the foundation for many of the major discoveries of particle physics in the latter years of the twentieth century. His rich career and devotion to fundamental knowledge have made him an exceptional model for young men and women working in the field anywhere in the world.

It is important to continue to attract the best minds of the present and future generations to continue this remarkable progress into the twenty-first century. The American Physical Society's Panofsky Prize is an important incentive toward this goal and a fitting tribute to one of the field's pioneers.

Please take time to fill out the attached coupon and make a generous contribution to the Panofsky Prize Fund.

Eugene Beier, Chair  
Division of Particles and Fields

**Committee members:**

Eugene Beier, Chair  
Martin Breidenbach  
Howard Gordon  
Nicholas Hadley  
David W.G.S. Leith  
Chris Quigg  
Stanley Wojcicki

**Coupon:** Available [here](#)

**News from HEPAP**

(Contributed by Neil Baggett and Glen Crawford, Office of Science, U.S. Department of Energy)

In an impressive display of interagency cooperation, the Department of Energy and the National Science Foundation have announced that the High Energy Physics Advisory Panel will now report to both agencies, rather than only to DOE as it has since it was established in 1967.

A federally chartered advisory committee, the High Energy Physics Advisory Panel (HEPAP) has formally advised DOE and informally advised NSF on their high energy physics research programs. On the basis of a Memorandum of Understanding signed by the Secretary of Energy and the Director of the National Science Foundation on October

27, 2000, HEPAP will now formally report to both agencies. Its members and chairperson will be appointed jointly by the Secretary and the Director. DOE and NSF are now jointly developing a new charter for HEPAP, to be effective in January 2001.

Experiments in high energy physics (HEP) are often collaborative efforts by scientists supported by the Department of Energy (DOE) working with others supported by the National Science Foundation (NSF). The two agencies have many common interests in this field of research, but also distinct strengths. DOE operates most of the accelerators that the scientists use, and conducts most of the research and development for future accelerators. NSF is based exclusively at universities and has a special role of connecting high energy physics research to the public and to other scientific fields, such as astronomy or computer and information science.

With the large and expensive facilities needed to advance this field of research, interagency efforts and international efforts are increasingly common. DOE and NSF are already collaborating on many projects; for example, helping European countries to build and use a large proton-proton collider called the LHC at the CERN laboratory in Geneva, Switzerland. Joint sponsorship of HEPAP will help DOE and NSF to integrate and coordinate their research efforts in high energy physics so as to be more effective and efficient.

Mildred Dresselhaus, Director of the DOE Office of Science, said, "Joint sponsorship of HEPAP adds a new dimension to our partnership with NSF in trying to answer the most fundamental questions about the nature of matter and energy." Robert Eisenstein, Assistant Director of NSF for Mathematical and Physical Sciences, described high energy physics as "a key element in America's science and education portfolio" and quoted a recent op-ed piece in the Washington Post by Harold Varmus, who said, "Medical sciences may seem like wizardry. But pull back the curtain, and sitting at the lever is a high-energy physicist, a combinatorial chemist, or an engineer."

Recently DOE has issued the HEPAP "White Paper" on Planning for U.S. High-Energy Physics as a printed report (DOE/SC-0027) and distributed it to university PI's, labs and other interested parties. It is also now available from the DOE/HEP website at: <http://hepserv.fnl.gov:8080/doe-hep/home.cfm>

The "White Paper" is HEPAP's response to a charge from the DOE Office of Science to update the findings of the 1998 Gilman subpanel, in the context of worldwide efforts in HEP. It is also a precursor to, and provides important input for, the DOE/NSF long-range planning subpanel chaired by Jonathan Bagger and Barry Barish. This NSF/DOE HEPAP subpanel is being formed "to review the central scientific issues that define the intellectual frontier of particle physics research and, based on that review, to develop a long range plan for the U.S. High Energy Physics program."

The subpanel is being charged to produce a plan for the next twenty years of high energy physics. (The full charge is available at <http://www.pha.jhu.edu/panel/>.) In developing the plan, the subpanel will have extensive consultations with the community, at the

Snowmass Workshop and at other town meetings. It will also solicit advice through the DPF email list. The subpanel's chairs ask that you join in this process so that the final plan reflects the rich vision of the DPF community.

## **News from NSF**

(Contributed by Marvin Goldberg, Elementary Particle Physics, National Science Foundation)

In order to promote the involvement of the research community in public educational activities, NSF's Directorate for Mathematical and Physical Sciences (MPS) announces the MPS Internships in Public Science Education (IPSE) program. IPSE is intended to bring the most recent science research results from MPS disciplines to the public by promoting partnerships between the MPS research community and professionals in public science education.

The IPSE program will support projects with durations of up to 3 years. We anticipate that a total of up to \$1 million will be available for 8 to 10 new awards in fiscal year 2001, subject to the number and quality of proposals received. The deadline for submission of proposals is 2 April 2001.

Details of the IPSE program and guidelines for proposal submission are available in the Program Solicitation (NSF 01-39).

For more information, please see <http://www.nsf.gov/home/mps/start.html>

## **Management Changes - LHC Experiments**

(Contributed by Timothy Toohig, Department of Energy)

Some 500 U.S. physicists are involved in the LHC project, most in the ATLAS and CMS detectors. As the detectors progress towards installation and commissioning, the management structures are being realigned to better accomplish these tasks. Several U.S. physicists have moved into central roles in those activities. Dave Lissauer from BNL has been appointed as a deputy to the new Technical Coordinator for the ATLAS detector in a major restructuring of that effort. Andy Lankford from UC Irvine has been named leader of the overall ATLAS Trigger/DAQ effort. On the CMS side, a U.S. CMS project office has been established at CERN to facilitate the U.S. CMS installation and commissioning efforts as U.S. CMS begins shipments of completed sub-detector elements to CERN.

## **APS Prize Winners**

Winners of the 2001 APS prizes have been announced. The following prize winners may be of interest to members of DPF:

**W. K. H. Panofsky Prize: Paul Grannis, SUNY, Stony Brook**

"For his distinguished leadership and vision in the conception, design, construction, and execution of the D0 experiment at the Fermilab Tevatron proton-antiproton collider. His many contributions have been decisive in all aspects of the experiment."

**J. J. Sakurai Prize: Nathan Isgur, Jefferson Lab, Mikhail Voloshin, the University of Minnesota, Mark Wise, California Institute of Technology**

"For the construction of the heavy quark mass expansion and the discovery of the heavy quark symmetry in quantum chromodynamics, which led to a quantitative theory of the decays of c and b flavored hadrons "

**Robert R. Wilson Prize: Claudio Pellegrini, UCLA**

"For his pioneering work in the analysis of instabilities in electron storage rings, and his seminal and comprehensive development of the theory of free electron lasers. "

**Maria Goeppert-Mayer Award: Janet Conrad, Columbia University**

"For her leadership in experimental neutrino physics, particularly for initiating and leading the NuTeV decay channel experiment and the Mini-BooNE neutrino oscillations experiment, which are noted for their timeliness and significance in resolving frontier issues in neutrino physics."

**Tanaka Dissertation Award: Dr. Sunil Golwala, California Institute of Technology**

We are pleased to announce the selection of Dr. Sunil Golwala as the first recipient of the Tanaka Thesis Award in Experimental Particle Physics. The Award was established in 1999 in memory of our colleague Dr. Mitsuyoshi Tanaka. Dr. Golwala, who is currently at the California Institute of Technology, wrote his dissertation on "Exclusion Limits on the WIMP-Nucleon Cross Section from the Cryogenic Dark Matter Search", while he was a student at the University of California at Berkeley. The Award carries a prize of \$1500 and is to be presented at April 2001 APS meeting where Dr. Golwala will give a talk about the results.

The Selection Committee was impressed with the quality of the candidates recommended for the Award, and looks forward to suggestions for next year. For more information on the Award, please see the web page <http://www.aps.org/praw/tanaka/index.html>.

A full list of APS prize winners for 2001 may be found at <http://www.aps.org/praw/01winners.html>.

**New APS Fellows**

Congratulations to the following people who were chosen Fellows of APS from DPF in 2000:

Geoffrey Bodwin, Eric Braaten, James Brau, Allen Caldwell, Bob Hsiung, Kay Kinoshita, Andrew Lankford, Nigel Lockyer, Burt Ovrut, Robert Pisarski, Serban Protopopescu, James Sanford, Junko Shigemitsu, Tomasz Skwarnicki, Yoji Totsuka, and

James Wiss

## **DPF Committees**

We thank the following members of our community who have generously given their time to serve on DPF committees this year:

### **Nominating Committee**

J. Brau (Chair), H. Schellman (Vice-Chair), B. Grinstein, J. Lykken, K. McDonald, J. Siegrist

### **W. K. H. Panofsky Prize Committee**

H. Weerts (Chair), M. Shapiro (Vice-Chair), L. Littenberg, J. Richman, E. Thorndike

### **J. J. Sakurai Prize Committee**

G. L. Kane (Chair), E. Simmons (Vice-Chair), M. Dine, A. Nelson, M. Shifman

### **Robert R. Wilson Prize Committee**

G. Dugan (Chair), W. Panofsky (Vice-Chair), H. Blosser, R. Palmer, R. Ruth

### **Tanaka Dissertation Award Committee**

H. Gordon (Chair), T. Ferbel (Vice-Chair), D. Cassel, J. Conrad, Y-K. Kim