

DPF NEWSLETTER - November 15, 1995

To: Members of the Division of Particles and Fields

From: Jonathan Bagger, Secretary-Treasurer, bagger@jhu.edu

DPF Elections

A ballot for the DPF elections is enclosed with this newsletter. This year we will elect a Vice-Chair, a Division Councillor, and two regular members of the Executive Committee. The current members of the DPF Executive Committee and the final years of their terms are

Chair: David Cassel (1995)

Chair-Elect: Frank Sciulli (1995)

Vice-Chair: Paul Grannis (1995)

Past Chair: Michael Zeller (1995)

Secretary-Treasurer: Jonathan Bagger (1997)

Division Councillor: Anne Kernan (1995), Henry Frisch (1997)

Executive Board: Sally Dawson (1996), Martin Einhorn (1997), Vera Luth (1995), John Rutherford (1997), Michael Shaevitz (1996), Bruce Winstein (1995)

The nominees for Vice-Chair are Howard Georgi (Harvard) and Bill Willis (Columbia). Drew Baden (Maryland) and George Trilling (U.C. Berkeley) are the candidates for Division Councillor. The nominees for regular members of the Executive Committee are Dan Amidei (Michigan), Thomas Devlin (Rutgers), John Gunion (U.C. Davis), William Molzon (U.C. Irvine), Harry Nelson (U.C. Santa Barbara) and Heidi Schellman (Northwestern).

The statements from the candidates are appended at the end of the newsletter. The deadline for receipt of completed ballots is December 31, 1995.

Snowmass 1996: New Directions for High Energy Physics

This summer there will be a Snowmass workshop in Snowmass, Colorado, from June 24 to July 12, 1996. Arrival, registration, and a reception are planned for June 24. Full-day plenary sessions will be held on June 25 & 26 and July 11 & 12. Participants are encouraged to stay for the full three weeks.

The workshop is jointly sponsored by the Division of Particles and Fields and the Division of Physics of Beams. The Chair is David G. Cassel (DPF) and the Co-Chair is Robert H. Siemann (DPB). The meeting will be arranged by an Organizing Committee assisted by an International Advisory Committee.

The members of the Organizing Committee are

Dan Amidei
Sally Dawson
Steve Holmes
Frank Merritt
Hugh Montgomery
Uriel Nauenberg
Michael Peskin
Lawrence Price

The International Advisory Committee consists of

Guido Altarelli
Charles Baltay
Ed Berger
Sidney Drell
Mary Gaillard
Fred Gilman
Paul Grannis
Daniel Green
Gordon Kane
Takahiko Kondo
Satoshi Ozaki
Roberto Peccei
Claudio Pellegrini
Lee Pondrom
John Rees
Frank Sciulli
George Trilling
Guenter Wolf
Michael Shaevitz
Andrew Sessler
Michael Zeller

The abstract of the meeting is quoted below:

We now have a picture of some key elements of the US contributions to the international HEP program for the first decade of the next century. In accord with the Drell Subpanel report, we believe that the LHC program will define the high-energy physics frontier and that participation by U.S. physicists in this effort is essential. In addition, we expect that the Fermilab Main Injector, the SLAC B Factory, and Phase III of CESR, will provide frontier capabilities in other fundamental areas of research.

The view of what facilities other than these should be included in the future US accelerator-based program is much less in focus. Specific groups are considering

possibilities as diverse as room temperature or superconducting linear electron-positron colliders, substantial upgrades in Fermilab luminosity or energy, and muon colliders. Detailed consideration of these options was beyond the scope of the Drell Subpanel. Many aspects were studied by the Working Groups of the DPF Committee on Long-Term Planning, but the CLTP effort did not include substantial comparisons of these different options.

We believe that now is the appropriate time to begin to develop a coherent plan for the longer term future for the U.S. program in the context of the international program. To do this, members of the US HEP community should come together with individuals from other nations to compare the capabilities, feasibilities, and relative strengths of possible new initiatives with those of the LHC and other facilities that will likely operate in the LHC era. This type of evaluation has traditionally taken place in the Snowmass workshops, so we propose a similar workshop in the summer of 1996 to begin to address these crucial issues and to move toward a consensus.

The workshop will focus on the accelerator-based program since the non-accelerator program was a major concern of the 1994 Snowmass workshop. We will encourage close cooperation among accelerator, experimental, and theoretical physicists to insure that all essential issues related to each initiative are examined and understood.

The workshop will be open to all members of the international HEP and accelerator communities. Special effort will be made to involve younger physicists and individuals from other countries who can provide essential insight into the international HEP program.

Joint Meeting of the APS/AAPT

The 1996 Joint Meeting of the APS/AAPT (the "Washington" meeting) will be held May 2-5, 1996 (Thursday to Sunday) in Indianapolis, Indiana. The meeting was moved from Washington to better involve physicists from across the country and to reduce the cost of accommodations.

The DPF plans a full range of sessions of topical invited talks. These include joint sessions with the Divisions of Astrophysics, Nuclear Physics, and Particle Beams, and dedicated DPF sessions devoted to current issues in Electroweak Interactions, Physics of Heavy Quarks, Physics Beyond the Standard Model, Strong Interaction Physics, Neutrinos and Rare Decays. There will be special sessions of talks by winners of this year's Panofsky and Sakurai prizes, as well as by recent Nobel prize winners. There will be a tutorial on the use of Mathematica, as well as a set of divisional colloquia on Nuclear and Particle Astrophysics. The colloquia will cover the dark matter of the universe, solar neutrinos, and blackbody radiation images of the early universe.

Parallel sessions, scheduled so as not to compete with invited talk sessions, will be held to accommodate contributed papers. The deadline for submission of abstracts for contributed papers is January 23, 1996 (in the APS Headquarters). Electronic submission

of abstracts is strongly encouraged to facilitate organizing the parallel sessions (see WWW information at [http://www.aps.org/.](http://www.aps.org/)) Information on the DPF sessions will be posted on WWW at [http://www.aps.org/units/dpf/april96/.](http://www.aps.org/units/dpf/april96/)

DPF 96 at University of Minnesota

DPF 96 will be held August 10-15, 1996 at the University of Minnesota in Minneapolis. Information can be obtained by contacting the DPF 96, Department of Physics, University of Minnesota, Minneapolis MN 55455. The URL for the conference is <http://www.hep.umn.edu:80/dpf96/> and the email address is dpf96@mnhep1.hep.umn.edu.

Committee on Elementary Particle Physics

The Board on Physics and Astronomy (BPA) of the National Research Council (NRC) is undertaking a series of reassessments of all branches of physics as the foundation for a new physics survey. This will provide a broad picture of physics as a whole, identify issues that are common to its various subfields, and show the relationships among the different fields of physics and other areas of science. To this end, the BPA is organizing a Committee of approximately 12 physicists in Elementary Particle Physics (CEPP) to assess scientific progress and the impact of recent advances and developments on the direction of the field. Bruce Winstein will chair the CEPP.

The Committee will be asked to:

- Describe the field, including a summary for a general non-scientist audience (including Congressional staff);
- Describe what has been learned over the last two decades;
- Identify key physics objectives for the next two decades;
- Describe the facilities, instruments, and detectors that are required to carry out research in this field, and outline future options under realistic scenarios;
- Outline the relationship with other areas of physics and technology;
- Consider general issues, such as education and manpower, and international cooperation;
- Communicate excitement of particle physics, including relevance to society, contributions to welfare of the country, and the practical benefits of accelerator science and technology, which will help Congress justify expenditures on this field.

The NRC study, which should be completed within the next two years, will build on the recent report of HEPAP's Subpanel on "Vision for the Future of High-Energy Physics," the 1986 NRC Report "Physics Through the 1990's" and the DPF CLTP report "Particle Physics: Perspectives and Opportunities."

The CEPP will have a major meeting during the Snowmass workshop so there will be ample opportunity for community input.

NSF Program in Elementary Particle Physics

The NSF section on Elementary Particle Physics has established a panel to provide advice on which accelerator-based scientific programs should be emphasized over the next five years. The panel has been asked to give a preliminary report by the end of 1995, with a final report by February 1, 1996. The membership of the panel is

R. Cahn (Chair, LBNL)
J. Butler (Fermilab)
P. Fisher (MIT)
F. Gilman (Carnegie Mellon)
N. Hadley (Maryland)
R. Patterson (Cornell)
A. Seiden (U.C. Santa Cruz)
M. Shapiro (U.C. Berkeley/LBNL)
W. Smith (Wisconsin)

Advice, comments, and suggestions may be directed to the Chair at rncahn@lbl.gov.

Committee on Long Term Planning

The report of the DPF Committee on Long-Term Planning has been published by World Scientific under the title, *Particle Physics: Perspectives and Opportunities*. The book was edited by Roberto Peccei, Michael Zeller, David Cassel, Jonathan Bagger, Robert Cahn, Paul Grannis and Frank Sciulli. It may be ordered directly from World Scientific; the cost is \$30 for APS members, and \$82 for nonmembers.

The CLTP report is the result of a broad-based study of high energy physics commissioned by the DPF Executive Committee. The study was initiated in the early 1994, in the wake of the cancellation of the SSC, and was meant to complement the report of HEPAP's Drell subpanel. The book contains the final reports of the eleven working groups, along with an extended overview and executive summary by the editors. The individual reports are also available at <http://www.aps.org/units/dpf/cltp/>.

1995 Sakurai, Panofsky and Wilson Prizes

The 1995 Sakurai and Panofsky Prizes were awarded at the Washington meeting of the APS. The 1995 Wilson Prize was presented at the Dallas meeting of the Division of Physics of Beams.

The 1995 J. J. Sakurai Prize for Theoretical Particle Physics was presented to Howard Georgi of Harvard University

For his pioneering contributions toward the unification of strong and electroweak interactions, and for his application of quantum chromodynamics to the properties and interactions of hadrons.

The 1995 W. K. H. Panofsky Prize in Experimental Particle Physics was awarded to Frank J. Sciulli of Columbia University

For his contribution to a seminal set of high energy neutrino experiments at Fermilab. These experiments played an important role in establishing the existence of weak neutral currents, they established accurate neutrino-nucleon cross sections and accurate values of basic electroweak parameters, they set important limits on neutrino oscillations, and they fit sum rules that helped establish the physical reality of quarks.

The 1995 Robert R. Wilson Prize for Achievement in the Physics of Particle Accelerators was presented to Raphael M. Littauer of Cornell University

For his many contributions to accelerator technology, in particular his innovative conception and implementation of a mechanism to provide multifold increases in the luminosity of single-ring colliding beam facilities by the establishment of separated orbits of opposing, many-bunch, particle beams. This work has enabled the Cornell Electron Storage Ring (CESR) to achieve record luminosities for electron-positron storage rings; the concept has been adopted, equally successfully, at the other major high energy physics facilities of the world.

New APS Fellows

The new APS Fellows in the Division of Particles and Fields were honored at the April meeting in Washington. The new Fellows are

Jeeva S. Anandan
Alan A. Chodos
Roger F. Dashen
Michael Dine
Peter H. Garbincius
S. James Gates
Francis L. Halzen
Boris L. Ioffe
Christopher H. Llewellyn-Smith
David B. MacFarlane
Bradley L. Roberts
Paul F. Shepard
Robert E. Shrock
George F. Sterman
Ryszard Stroykowski
S.-H. Henry Tye
Peter van Nieuwenhuizen

Panofsky and Wilson Prize Endowments

The Panofsky and Wilson Prizes are still under-endowed. As of June 30, Panofsky Prize account stood at \$64,876, while the Wilson Prize account contained \$64,389. Each prize should have an endowment of \$100,000.

During the past year, the APS has received 16 donations to the fund endowments. The DPF Executive Committee would like to express its deep appreciation to the DPF members who contributed. It also asks that all members consider helping support these prizes which honor distinguished achievement in our field. Please send contributions directly to the APS, with a cover letter indicating the prize to be credited.

Bethe Prize Endowment

The Divisions of Astrophysics and Nuclear Physics are creating a prize in honor of Hans Bethe. Given the breadth of Bethe's work, they feel it would be especially meaningful if contributions to the Prize were to come from physicists throughout the APS. Indeed, Bethe's contributions to particle physics and particle astrophysics (QED, renormalization, Lamb shift, supernovae, solar neutrinos, ...) make him a special member of the DPF community.

To date, the Bethe Prize fund has received \$25,000 of the \$100,000 necessary for full endowment. Please send contributions (made out to APS -- Hans Bethe Prize) to Ernest M. Henley or Wick Haxton, Co-Chairs, Bethe Prize Committee, University of Washington, Box 351550, Seattle, WA 98195-1551.

Page Charges for Physical Review D

In July 1992 page charges were waived for all manuscripts submitted to Physical Review D and for compuscript manuscripts submitted to Physical Review C. This was envisioned as a three-year pilot project to study the effects of page charges on the Physical Review journals. As the end of this period was approached the future of page charges for the journals came under intense scrutiny. The issues include the financial health of the journals, equity among the APS Divisions, the future of the journals in the coming era of electronic publishing, and the influence of page charges on publishing habits. Resolution of these issues is vital to maintaining the quality and long-term future of the Physical Review. The PRD Editor Lowell Brown, the Associate Editors, and the DPF Executive Committee strongly advocated the elimination of page charges for PRD in order to insure that publication costs are not an issue when authors choose the journals to which they submit manuscripts.

There has been much discussion of this issue at various levels in the APS and reaching a consensus has been very difficult. At its last meeting the Publication Oversight Committee recommended that page charges be eliminated for compuscript manuscripts submitted to PRC and PRD, and that they gradually be phased out for compuscript manuscripts submitted to the other sections of PR (but not Physical Review Letters). This phase out will eventually result in equity of publication costs for all Divisions of the Society. If this recommendation is adopted, the substantial income that now comes from

page charges will be lost so stringent efforts to reduce costs and increase efficiency will be required. Nevertheless, the DPF Executive Committee hopes that this proposal or one close to it will be adopted because it feels that page charges undermine the efforts to maintain the quality of PRD.

Physical Review Editor

Lowell Brown's term as Editor of Physical Review D is coming to an end after more than eight years of dedicated service. Over these years many of our most valued colleagues who had drifted away from PRD before Lowell's tenure have returned. Lowell's high standards, excellent taste, and concern for PRD, have been essential in returning the journal to a position approaching the one it held in the scientific literature in earlier years. The DPF Executive Committee wants to take this opportunity to express publicly its special appreciation to Lowell for his contributions to the high energy physics community and his dedication to the quality of PRD.

An editorial search committee chaired by Michael Turner has been established. Individuals interested in the position or who wish to nominate a colleague are invited to contact him at mturner@fnalv.fnal.gov.

DPF Reception in Congress

The DPF held a reception in Congress on June 6, 1995 from 5 to 7 PM in the House Science Committee Room. Four laboratories (plus the US LHC contingent) prepared posters and videos. A diverse group of fifty physicists from graduate students through senior physicists attended. Two lab directors, many DOE, NSF, and other government and APS officials were present. The event was organized by the DPF Public Information Coordinator, Michael Barnett (LBNL), with substantial assistance from URA and the APS. Rep. Walker's staff was particularly helpful in arranging the reception.

The reception was low key with the emphasis being on education and information. Many House and Senate aides plus Rep. George Brown were present and seemed to enjoy and learn from the session. A chief aide on the House Appropriations Committee referred to it as a "four-star event." Younger physicists were especially effective in communicating. The timing of this informational event was perfect and though any correlation is not known, the House Science and Appropriation Committees treated HEP well.

Contemporary Physics Education Project

The DPF Executive Committee voted to donate \$5,000 to the Contemporary Physics Education Project. CPEP is a unique collaboration of teachers and physicists with ten years of experience in creating educational materials about particle physics. It created the colorful wall chart summarizing the fundamental particles and interactions. Over 100,000 charts have been distributed. CPEP has also created interactive software and a packet of classroom activities which describe the standard model, as well as accelerators and detectors. The CPEP packet was distributed free to every high school physics teacher in

the US. More recently CPEP posted the Particle Adventure on WWW, with quizzes, humor, and colorful graphics (student artwork). (See <http://pdg.lbl.gov/cpep.html>.)

Requests for CPEP products come from all 50 states and more than 80 countries. The BBC World Service, *Science*, and others have reported about its activities. CPEP has received initial funding to produce a state-of-the-art multimedia CD-ROM on particle physics. The DPF contribution is intended to help CPEP conduct workshops and assist teachers presenting this subject.

CPEP is also working with physicists in other areas of physics. A chart and other materials on plasma/fusion physics will soon be released. A nuclear physics chart is in progress, and one on astrophysics is under consideration. The connections with other physicists and teachers are quite valuable.

CPEP has received and seeks funding from a variety of private and government sources for workshops and product development. DPF members involved include: Helen Quinn, Michael Barnett, Michael Riordan, Gordon Aubrecht, Robert Cahn, Gerson Goldhaber, and David Jackson.

DPF Standing Committees

During the course of the year, the DPF Executive Committee relies on four standing committees to carry out various important and time-consuming tasks on behalf of the DPF. They are the Nominating, Panofsky Prize, Sakurai Prize, and Wilson Prize Committees.

The members of these committees for this year are listed below. The DPF Executive Committee would like to express its thanks to them for their special contributions on behalf of our community.

Nominating Committee

Abe Seiden (Chair)
Marj Corcoran
Melissa Franklin
Gordon Kane
Rolly Morrison

Panofsky Prize Committee

Vera Luth (Chair)
Thomas Devlin
Gary Feldman
Henry Frisch
Gerson Goldhaber

Sakurai Prize Committee

Robert Jaffe (Chair)
Lawrence Hall
Yoichiro Nambu
Chris Quigg
Mark Wise

Wilson Prize Committee

Perry Wilson (Chair)
Klaus Berkner
Thomas Collins
Stephen Holmes
Christopher Leeman

Electronic Issues

The DPF finally has a home page. The DPF home page can be accessed through the APS home page at <http://www.aps.org/> or directly at <http://www.aps.org/units/dpf/>.

Links on the page include:

DPF Executive Committee,
DPF Nominations Committee,
DPF Bylaws,
DPF Newsletters,
DPF Prizes,
Current Deadlines,
Conferences,
Planning Exercises and
Online Information.

Please send suggestions for improvements to Jonathan Bagger, bagger@jhu.edu.
(Because of the links to conference servers, the conference listing is no longer included with this newsletter.)

The APS is developing an email database of APS members. This database will allow the DPF Executive Committee to contact DPF members directly. Please make sure that APS has your up-to-date email address. You can change your email address on-line from the APS home page.

Certain features of the APS site are password protected for access by members only. The userids for APS News Online and the Online Member Directory Search are "apsnews" and "directory," the password for both is "F=ma."

VICE-CHAIR: VOTE FOR ONE

HOWARD GEORGI, Harvard

Born January 6, 1947, in San Bernardino, California, Georgi spent his undergraduate years at Harvard in Chemistry and Physics. He went to Yale in 1967 and did a Ph.D. with Charles Sommerfield. He returned to Harvard in 1971 first as a postdoc and two years later as a Junior Fellow in the Society of Fellows. He joined the faculty in 1976 and was promoted to Professor in 1980. He served as department chair from 1991-94, and is now a Mallinckrodt Professor of Physics and a Senior Fellow in the Society of Fellows. He has been an editor of Physics Letter B since 1982.

His work in particle theory has involved many aspects of the standard model, particularly QCD and grand unified theories.

He is a Fellow of the American Academy of Arts and Sciences and the American Physical Society. In 1995, he received the Sakurai Prize from the APS, and he was elected to the National Academy of Sciences. He is a member of the APS Committee on the Status of Women in Physics and the Executive Committee of the Forum for Education.

Statement: As a still recovering former department chair, I do not need a new organizational project. But when I was asked to run for Vice Chair of the DPF, I did not hesitate for very long. I would be honored to give back something to the field that I have loved for thirty years. Times are tough. We still have compelling physics to do but with scarce resources and little margin for error. I do not pretend to know what the state of the field will be in fifty years, but I do know that we have much vital work to do in the next twenty five years to complete our understanding of the standard model. We must maintain our own enthusiasm for this goal, or we will not be able to convince our fellow citizens and our political leaders to support it. At the same time we must be realistic and willing to make difficult choices for ourselves, so that they will not be made for us.

I am impressed that talented young people continue to join us in spite of the uncertainties. But more so than ever before, we must compete with other branches of science and technology to keep the best. Students are still fascinated by our questions. Indeed I believe that we are responsible for motivating thousands of students to endure the rigors of a technical education. Even now, only a tiny fraction of these end up in particle physics. But this fraction will surely shrink even further in the years ahead, and we must find new mechanisms for allowing young people to participate in our quest.

BILL WILLIS, Columbia

Bill Willis was born in Arkansas in 1932. He received a Ph.D. from Yale in 1958 and joined BNL where he remained until 1965, except for a year at CERN in 1961-62. He has

been a Professor of Physics at Yale 1965-1973, on the staff at CERN 1973-1990, and has been at Columbia since 1990, where he is Eugene Higgins Professor of Physics. Up to 1970, he studied the properties and decays of the strange particles with the bubble chamber technique. His work with electronic experiments started with experiments on kaon decay at ANL and hyperon decay with the first hyperon beam at BNL. In preparation for experiments at hadron colliders, he carried out a series of studies of calorimeters using scintillator technique and initiating the use of liquid argon for calorimetry. He also developed the use of transition radiation detectors for particle identification, in conjunction with detectors with two-dimensional readout. These devices were applied in experiments at the CERN ISR on high-mass electron pair production. These same experiments led to the discovery of direct single photons from QCD Compton scattering, which was one of the first signals seen specific for gluons. Another experiment used compensated calorimeters for the first detection of jets at the ISR. He has been involved in the search for effects of quark- gluon plasma in the collisions of nuclei from its beginning. He has been working on the new generation of proton-proton colliders for the past several years, and is currently the Coordinator for the U.S. ATLAS Collaboration. He is a member of HEPAP.

Statement: As the only broad-based representative organization speaking for particle physics in a time of rapid change in science, the DPF has an especially important role in the next few years. We can expect developments which affect all of us, and we must give first priority to preserving future opportunities for the young scientists in our field even it means we cannot do everything we would like to do in other areas. We must adapt our efforts to communicate the excitement of our field to the world we live in, where the public is bombarded by so many messages. A very active and lively program of public education is a key element in our effort to improve the representation of minorities and women in our field.

DIVISION COUNCILLOR: VOTE FOR ONE

DREW BADEN, Maryland

Drew Baden was born in Bangor, Maine in 1954. He received his BA in History from the University of Wisconsin, Madison in 1976, a BS in Physics from San Francisco State University in 1981, and a PhD in Physics from Berkeley in 1986 where he worked with Gerson Goldhaber and others on the MarkII e^+e^- experiment at SLAC. He spent 3 years as a post-doc at Harvard University working on the CDF experiment at Fermilab. In 1991 he became an Assistant Professor and in 1995 an Associate Professor of Physics at the University of Maryland where he works with Professors Nick Hadley and Sarah Eno on the D0 experiment at Fermilab. He spent a year at the SSC as an SSC Fellow in 1992 working on SDC. Baden has a long history of involvement in TOP physics, contributing to the current Fermilab techniques in the use of total transverse energy measurements.

Statement: Doing physics is a fantastic way to make a living, however our field is becoming more and more contentious every day. This, coupled with the shrinking pots, threatens the two things which HEP needs in order to sustain itself: young physicists

entering the field; and discovery. It's about time that we, collectively, look at things from a much broader perspective. I hope that the DPF can play a role in this. As was once said, "you are either part of the solution, or part of the problem". We shall see, however if we continue to be passive, we will find ourselves overtaken by events - *deja vu* again!

GEORGE TRILLING, U.C. Berkeley

George Trilling received his B.S. (1951) and Ph.D. (1955) from Caltech. After a postdoctoral year at Caltech, and a Fulbright Fellowship in France, he joined the University of Michigan physics faculty in 1957. In 1960, he moved to the University of California, Berkeley, Physics Department and the Lawrence Berkeley National Laboratory (LBNL). He served as department chair (1968-72) and Director of the LBNL Physics Division (1984-87). He has served on HEPAP (1974-78), three HEPAP subpanels, the SLAC and Fermilab program committees, and chaired the SLAC SPC (1984-88). For the APS, he served as Chair of DPF (1976-77), and was a member of the Physics Planning Committee of the APS (1991-94). He is presently a member of the Science Council of the Joint Institute for Nuclear Research in Dubna. He is a Fellow of the APS, and a member of the National Academy of Sciences.

His research up to 1973 was in the study of hadronic interactions, using hydrogen bubble chambers. From 1973 to 1989, he was a participant in the Mark I and Mark II experiments at the SPEAR, PEP and SLC electron-positron colliders at SLAC. Between 1990 and 1993, he served as Spokesperson of the Solenoidal Detector Collaboration at the SSC. Since the cancellation of the SSC, he has been involved in the ATLAS project at CERN, and currently serves as Chair of the U.S. LHC Collaborators Executive Committee.

Statement: There is a view in some influential quarters of the U.S. scientific community, and even the physics community, that high energy physics is no longer interesting, that the large collaborations in our field stifle creativity, and that only small groups doing "small" science can be expected to make important discoveries. It is our task, through the excellence of our work, through the judiciousness of our priority setting in an unfavorable budgetary environment, and through our continuing efforts to explain what we do, to convince our colleagues in other scientific areas of the continuing vitality and creativity of high energy physics, and the outstanding strength of its U.S. practitioners.

EXECUTIVE COMMITTEE: VOTE FOR TWO

DAN AMIDEI, Michigan

Dan Amidei received a B.S. degree from MIT in 1978 and a Ph.D. from the University of California at Berkeley in 1984. He held a postdoctoral position at the University of Chicago from 1984-1988, and he was an Associate Scientist at FNAL from 1988-1990. Since 1990 he has been at the University of Michigan, where he is presently an Associate Professor of Physics. In 1991 he was selected as a DoE Outstanding Junior Investigator.

After a thesis on vertex detection at the MarkII at PEP, his work has centered on the CDF experiment at the FNAL Tevatron, where he has contributed to the trigger, the silicon vertex detector, and the top search and discovery. In 1994 he helped organize the grass roots "tev 2000" workshop which has completed a preliminary study of the potential for electroweak physics with very high luminosity at the Tevatron.

Statement: While there is justifiable concern with reinventing the future, we need also to live sensibly in the present. Three components of this sensibility are: a responsible attitude towards resources and investments, a commitment to nurturing multiple paths and novel approaches, and the objectivity and realism that follow from putting the physics first.

THOMAS DEVLIN, Rutgers

Thomas Devlin was born in 1935 in Jenkintown, Pennsylvania. His early education was at Immaculate Conception School in Jenkintown and LaSalle High School in Philadelphia. He received a B.A. in physics and mathematics from LaSalle College in 1957. At the University of California, Berkeley, he earned his M.A. (1959) and Ph.D. (1961) in physics under the direction of Burton J. Moyer. {}From 1962 to 1967, he served on the faculty at Princeton University. Since 1967, he has been at the Department of Physics and Astronomy at Rutgers - The State University of New Jersey. In 1970-71, he was a guest scientist at CERN. In 1980-81 and again during 1988-90, he was a visiting scientist at Fermilab

Professor Devlin has performed experiments at Berkeley's Bevatron and 184-inch cyclotron, at the Princeton-Pennsylvania Accelerator, at Brookhaven's AGS, at Argonne's ZGS and at CERN's PS. From 1974 to 1985 at Fermilab, he and his collaborators performed a series of experiments on the polarization and magnetic moments of hyperons. For this work, he and Professor Lee Pondrom at Wisconsin shared the 1994 W.H.K. Panofsky Prize of The American Physical Society. Professor Devlin's current research is centered on proton-antiproton annihilations with CDF at Fermilab's Tevatron.

He has taught a variety of courses at the undergraduate and graduate level for students studying technical subjects such as physics, engineering, pre-med and biology. He has also taught Astronomy and Cosmology to non-science students. During 1995-96, he is teaching second-year physics to engineers. Sixteen graduate students have earned their doctorates under his supervision.

In Spring, 1995, in response to the widespread perception that good research at universities necessarily results in neglect of teaching, he surveyed U.S. and Canadian professors who signed the papers announcing the discovery of the top quark. The survey contradicted the perception. An article describing the results was published in the New York Times in June and is available on WWW (http://pdg.lbl.gov/top_teachers.cfm).

He is married to Dr. Nancy Sherry Devlin, a psychologist, educator, author and columnist for the Newark Star-Ledger. They have three sons.

JOHN F. GUNION, U.C. Davis

Jack Gunion received the B.S. degree from Cornell University in 1965. Following a year at Imperial College, England on a Fulbright Scholarship (Diploma program in High Energy Theory), he continued his graduate studies at the University of California at San Diego, where he was awarded the Ph.D. in 1970. He held postdoctoral positions from 1970-1972 at Stanford Linear Accelerator Center, and from 1972-1973 at MIT. In 1973 he joined the faculty at the University of Pittsburgh as an Assistant professor. He moved to the University of California at Davis in 1975, where he is now a Full Professor.

Gunion has held visiting positions at U.C. San Diego (1979), the Institute for Theoretical Physics, U.C. Santa Barbara (1981 and 1988), the University of Oregon (1985), CERN (1992) and SLAC (1994). He was a recipient of the Alfred P. Sloan Fellowship and is a Fellow of the American Physical Society. Gunion's research focuses on the interface between theory and experiment in high energy physics, with particular emphasis on the role of current and future colliders in exposing the next layer of physics beyond the Standard Model at the TeV energy scale. His publications encompass the parton model and QCD (especially high-transverse-momentum and deep-inelastic phenomena), electroweak symmetry breaking and Higgs bosons, and supersymmetry. He has participated in virtually all of the major studies regarding future facilities and programs in high energy physics, including the Snowmass workshops and Linear Collider workshops, often acting as organizer or co-organizer of a working group (usually related to supersymmetry or Higgs physics). Most recently he served as co-leader of the Light Higgs Working Group of the *Electroweak Symmetry Breaking and Beyond the Standard Model* component of the DPF Study on Future Facilities (reports to be published by World Scientific), and he is currently co-organizer of the Physics Working Group looking into a $\mu^+\mu^-$ Collider. He is a member of the CMS collaboration at the CERN LHC. He is co-author (with Haber, Kane and Dawson) of the *Higgs Hunters Guide*.

Statement: The promise of dramatic progress in High Energy Physics has never been greater, but equally great is the challenge of generating the public understanding and support that will give us the opportunity to fulfill this promise. The DPF must vigorously and effectively communicate its collective excitement and expertise to the public as a whole, as well as to its appointed and elected representatives. A particular focus should be the preservation of the integrity of the High Energy Physics program regardless of any redistribution of governmental agency responsibilities. Probable budget constraints imply that we may be forced to make many agonizing and critical decisions in the coming years regarding the best path(s) for achieving fundamental breakthroughs. The DPF can and should play a significant role in analyzing and delineating the consequences of the various options, and, if possible, promoting a consensus point of view. The DPF must work to ensure that the youth of the nation are exposed to the excitement and significance of our research. The DPF should promote opportunities for the brightest young people to enter the field; for example, sponsorship of programs such as the involvement of undergraduate students in research should be expanded. However, even as we encourage new researchers and create appropriate entry-level openings, we must develop practical responses to the supply/demand fluctuations in permanent research positions.

WILLIAM MOLZON, U.C. Irvine

William Molzon received the B.S. degree from Caltech in 1974 and the Ph.D. from the University of Chicago in 1979. He was a Scientific Associate at CERN from 1979 until 1981, at which time he joined the faculty at the University of Pennsylvania. He moved to the University of California, Irvine in 1988, where he is now professor of physics. He did his thesis research at Fermilab on K_L^0 regeneration phenomena. At CERN, he worked at the ISR on the first experiment to measure prompt photon production and on one of the early experiments to measure hadronic jet production. Molzon's recent interests are in tests of muon and electron number conservation. In 1984, he and collaborators proposed a series of experiments to study rare decays of neutral kaons at BNL. He was co-spokesman of BNL E791 and is now co-spokesman of E871; these experiments constitute the most sensitive search for electron and muon number violation in hadronic decays. He serves on the Fermilab PAC, and was recently elected chairman of the BNL high energy and nuclear physics Users Executive Committee. Molzon was a Sloan Fellow 1983-1985, and a DOE Outstanding Junior Investigator from 1984-1986. *Statement:* We are at a particularly crucial time in the development of our field. It is important for the DPF to make the case for the intellectual excitement and vigor of particle physics research to our colleagues, the public, and our government. A slowing or cessation of growth is discouraging smart young people from pursuing a career in the field. We should address the issue of the difficulties they face in pursuing traditional career paths and articulate and strengthen our role in contributing to alternative paths. Our community must make difficult choices in allocating the limited resources available, and the DPF should continue an active advisory role in these choices. As an independent entity, the DPF can be particularly effective in advocating the position of the University based research effort.

HARRY NELSON, U.C. Santa Barbara

Harry Nelson received his A.B. from U.C. Berkeley in 1981, and was awarded his Ph.D. for experimental work at SLAC from Stanford in 1988. He was subsequently a Paid Associate and staff member at CERN, until he moved to UCSB in 1990, where he is now Associate Professor. Nelson is a DOE Outstanding Junior Investigator.

Nelson's research interests have focused on heavy quarks, CP violation in the Neutral Kaon system, and searches for new particles, particularly axions and light Higgs'. He also has had leadership roles in the successful construction of three major detectors, most recently a three-layer double-sided silicon vertex detector for the CLEO-II detector. He is currently a member of the CLEO collaboration.

Statement: My general concerns are that particle physics remain vigorous and creative, while still exploiting professionalism in the construction and management of our experimental facilities. My particular concerns are that young physicists receive well rounded training sufficient to make them able to pursue varied careers, that Universities remain vigorous in their pursuit of particle physics, and that our younger researchers remain capable of initiating research programs, possibly outside the focus of their thesis research or research areas of their mentors.

HEIDI SCHELLMAN, Northwestern

Heidi Schellman received her B.S. Degree in Mathematics from Stanford in 1977 and her Ph.D. in Physics from Berkeley in 1984 for work on the Mark II detector at PEP. She was a post-doc at the University of Chicago from 1985-1988 and a Wilson Fellow at Fermilab from 1988-1990. She has been on the faculty at Northwestern University since 1990 where she is now an Associate Professor. She is currently spokesperson for FNAL E-665, muon-nucleon scattering and is also involved in the D0 collider experiment and the NuTeV neutrino experiments at FNAL. She served on the Fermilab User's Executive Committee from 1993-1995.

Statement: I see a twofold role of the Division of Particles and Fields. First to provide communications within the field; the DPF meetings are an excellent example of this. It provides a unique (in the U.S.) opportunity for young people to present their work in a longer format with proceedings. I would like to see more such meetings of that caliber, perhaps on more restricted topics, sponsored by the DPF. The second role is communication with the wider community outside of our subfield. The demise of the SSC has led to great pessimism about the future of our field on the part of other physicists and university administrators. We as a field still have a lot of rebuilding to do in this area. We also need to continue the excellent work being done by DPF and other organizations in bringing new science to the general public.

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