

DPF NEWSLETTER - April 15, 1996

To: Members of the Division of Particles and Fields

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

1995 DPF Elections

Howard Georgi was elected Vice-Chair of the DPF. Tom Devlin and Heidi Schellman were elected to the Executive Committee. George Trilling was elected as a Division Councillor. The current members of the DPF Executive Committee and the final years of their terms are

Chair: Frank Sciulli (1996)

Chair-Elect: Paul Grannis (1996)

Vice-Chair: Howard Georgi (1996)

Past Chair: David Cassel (1996)

Secretary-Treasurer: Jonathan Bagger (1997)

Division Councillor: Henry Frisch (1997), George Trilling (1998)

Executive Board: Sally Dawson (1996), Tom Devlin (1998), Martin Einhorn (1997), John Rutherford (1997), Heidi Schellman (1998), Michael Shaevitz (1996)

Call for Nominations: 1996 DPF Elections

The 1996 Nominating Committee is hard at work. Please send suggestions for candidates to the Chair, Abe Seiden of Santa Cruz (abs@slac.stanford.edu). The other members of the Nominating Committee are Melissa Franklin, Robert Jaffe, Michael Murtagh, Helen Quinn, and Bill Reay.

DPF Members are also entitled to nominate candidates by petition. Twenty signatures from DPF members are required. Nominations will be accepted by Jonathan Bagger until May 15, 1996.

Snowmass 1996: New Directions for High Energy Physics

The 1996 Snowmass Workshop on New Directions in High Energy Physics will be held in Snowmass, Colorado, from June 24 to July 12, 1996. Arrival, registration, and a reception will be on June 24. Full-day plenary sessions will be held on June 25-26 and July 11-12.

This workshop will provide an opportunity to begin to develop a coherent plan for the longer term future for U.S. High Energy Physics in the context of the international program. The capabilities, feasibilities, and relative strengths of possible new initiatives will be compared with those of the LHC and other facilities that will likely operate in the LHC era.

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

The workshop is open to all members of the international HEP and accelerator communities. Participation of younger physicists and individuals from other countries is particularly welcome. Please register!

The Working Groups and their Conveners are listed below. Please contact them for more information, or browse the Snowmass web page, <http://fnphyx-www.fnal.gov/conferences/snowmass96/welcome.html>.

1. QCD
 - Philip Burrows (MIT)
 - Sally Dawson (BNL)
 - Steve Ellis (Washington)
 - Lynne Orr (Rochester)
 - Wesley Smith (Wisconsin)
2. New Phenomena
 - Stephen Godfrey (Carleton)
 - JoAnne Hewett (SLAC)
 - Kirk McDonald (Princeton)
 - Lawrence Price (ANL)
3. Light Higgs
 - Howard Haber (UC Santa Cruz)
 - Tao Han (UC Davis)
 - Frank Merritt (Chicago)
 - John Womersley (Fermilab)
4. Strong Coupling
 - Dan Amidei (Michigan)
 - Sekhar Chivukula (Boston U)
 - Persis Drell (Cornell)
 - Nick Hadley (Maryland)
 - Michael Peskin (SLAC)
5. Supersymmetry
 - Jonathan Bagger (Johns Hopkins)
 - Uriel Nauenberg (Colorado)
 - Xerxes Tata (Hawaii)
 - Andrew White (UT Arlington)

6. Accelerators
 - o Michael Harrison (BNL)
 - o Stephen Holmes (Fermilab)
 - o Ewan Paterson (SLAC)
 - o Jonathan Wurtele (LBNL)
7. Detector Coordinating Committee
 - o Martin Breidenbach (SLAC)
 - o Gil Gilchriese (LBNL)
 - o Ron Lipton (Fermilab)

Joint Meeting of the APS/AAPT

The annual meeting of the APS/AAPT will be held in Indianapolis, Indiana, May 2-5, 1996. Invited sessions of interest to DPF members include: Heavy Quark Physics; Electroweak Phenomena; Searches for New Phenomena; Studies of QCD; Neutrinos and Rare Decays. The DPF Prize Session will feature talks by the recent Nobel, Sakurai and Panofsky Prize recipients.

Joint sessions are planned with Nuclear Physics (spin structure, coherent phenomena, and relativistic heavy ion physics); with Astrophysics (cosmological CP violation, axions, gravity waves, and dark matter searches); and with Particle Beams (prospects for future colliders and the physics potential). There are in addition some 18 parallel contributed paper sessions, considerably more than last year.

More information can be found on the APS web page, <http://www.aps.org/>.

DPF 96 at University of Minnesota

The 1996 Divisional Meeting of the DPF will be held on the Twin Cities Campus of the University of Minnesota in Minneapolis, August 10-15, 1996. Registration and a Welcoming Reception will take place on Saturday evening, August 10, with plenary sessions in the mornings and parallel sessions in the afternoons scheduled for Sunday, August 11, through Thursday, August 15.

DPF 96 will include all current topics in experimental and theoretical elementary particle physics, as well as related areas such as astroparticle physics, heavy ion physics and instrumentation and experimental techniques.

Up-to-date information on DPF 96 including Abstract Submittal Information, (Pre)-Registration Forms and Housing Reservation Forms are available at <http://mnhepw.hep.umn.edu/dpf96/>. Information on how to submit abstracts is also available from the APS Meetings Department by sending an e-mail message to absinfo@aps.org and using the word "info" in the text of your message.

Important dates for DPF 96 are:

May 1, 1996, deadline for submitting abstracts for contributed papers;
June 1, 1996, deadline for pre-registration discount;
July 1, 1996, deadline for housing reservations;
August 15, 1996, deadline for submitting text for contributed papers.

Request for Proposals: DPF 98

The 1998 Divisional Meeting will be held during the summer of 1998. If you are interested in hosting this meeting, please contact Frank Sciulli (x707fjs@nevis.columbia.edu). Proposals are due by August 1, 1996.

Committee on Elementary Particle Physics

The National Research Council's Committee on Elementary-Particle Physics (CEPP) is preparing a written assessment of the field that is meant to communicate the excitement of our work at a lay level (e.g. to Congressional aides) and provide helpful input to the long-range planning process for elementary-particle physics. The committee has recently added a few members; the full membership is listed on the CEPP home page, at <http://www.nas.edu/bpa/>.

The CEPP recently held its second meeting at the National Academy of Sciences' Beckman Study Center. At that meeting, the report outline was agreed to. Following are the major chapters of the report as presently envisioned:

1. Introduction: What is Elementary Particle Physics?
2. The Phenomena of Elementary-Particle Physics.
3. Theoretical Framework.
4. Things Recently Learned.
5. Goals for the Future.
6. Methods and Techniques.
7. Benefits to Society.
8. Interactions with and Connections to Other Branches of Physics (Cosmology, Astrophysics, etc.) and Technology.
9. Education, Organization, Outreach, and Sociology and Demographics.
10. Conclusions and Recommendations.

The committee is making progress in the preparation of a research briefing, a twenty-page interim report that will describe some of the main objectives of the field in lay language. When the briefing is complete, it will be discussed with members of the Congress and leaders of the Department of Energy and the National Science Foundation. The committee also hopes that the research briefing can be distributed to university physics departments and even to high school physics teachers.

CEPP invites input to anyone on the committee. The next committee meeting will take place at the DPF Snowmass 96 meeting where there is planned to be an update on CEPP activities at the opening session. Committee members will be involved in the working

groups of Snowmass 96, listening to the community's ideas for the future and making themselves available for informal discussions. The CEPP will meet just after the final plenary session to access the workshop and to incorporate the views of the community into its report.

DPF Reception in Congress

The DPF invites you to attend a reception for Members of Congress and their aides, sponsored by Rep. Robert Walker, chair of the House Science Committee. The DPF hopes that a diverse group of physicists, including graduate students and postdocs, will join in communicating the excitement and importance of science from the perspective of particle physics.

Congressional aides reported that last year's event was very informative. They especially appreciated meeting younger physicists. Laboratories and others are invited to display posters. Please RSVP if you plan to attend, and let us know if you will bring a poster.

The time and place are Wednesday, June 5, 1996, 5-7 PM, House Science Committee Room 2318, Rayburn House Office Building.

Electronic Issues

The DPF is now communicating with its members by email. If you have not received any communications, it means that you have an obsolete email address on file with APS.

You can update your email address on-line from the APS home page, <http://www.aps.org/>. The userid for the Online Member Directory Search is "directory," and the password is "F=ma." Please be sure to use a valid internet address. Do not use bitnet or hepnet/decnet.

The number of links from the DPF home page is growing. Recent additions include links to DOE, NSF, HEPAP, and the report of the Cahn panel. Minutes of the DPF Executive Committee meetings are also posted. 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/>.

NSF Program in Elementary Particle Physics

The report of the Cahn Panel (the NSF Special Emphasis Panel) is now available at <http://www-physics.lbl.gov/www/theorygroup/cahn/nsf.html>.

Education

The Contemporary Physics Education Project has begun a project to produce a state-of-the-art multimedia CD-ROM about particle physics. (CPEP is the physicist/teacher organization that produced the wall chart on the Fundamental Particles and Interactions,

as well as the interactive tour, The Particle Adventure at <http://pdg.lbl.gov/cpep.html>.)
Please send suggestions to Michael Barnett (rmbarnett@lbl.gov).

DOE education programs have been especially hard hit by the cutbacks in Washington. The education budget for the national laboratories was cut by 16% in FY95 and by 70% in FY96. In particular, Congress removed all funding for pre-college programs. This has had a devastating impact on laboratory education efforts. Please remember laboratory education programs in your communications with Congress!

Survey of HEP Physicists

The Particle Data Group has completed a survey of HEP physicists commissioned by the DPF, DOE, and NSF. Topics include physics activities, current collaborations, employment history, education, numbers of women and minorities, and occupations of HEP dropouts. These results can be seen from the PDG home page, <http://pdg.lbl.gov/>.

1996 Sakurai, Panofsky and Wilson Prizes

The 1996 Sakurai, Panofsky and Wilson Prizes will be awarded at the Indianapolis meeting of the APS.

The 1996 J. J. Sakurai Prize for Theoretical Particle Physics will be presented to William Bardeen of Fermilab

For fundamental insights into the structure and meaning of the axial anomaly and for contributions to the understanding of perturbative quantum chromodynamics.

The 1996 W. K. H. Panofsky Prize in Experimental Particle Physics will be awarded to Gail Hanson of Indiana University and Roy Schwitters of the University of Texas.

Gail Hanson and Roy Schwitters are honored for their separate contributions which together provided the first clear evidence that hadronic final states in e^+e^- annihilation, which are largely composed of spin 0 and spin 1 particles, originate from the fragmentation of spin 1/2 quarks.

Gail Hanson observed hadron jets and determined the jet axis by developing and applying the sphericity analysis to the hadrons in e^+e^- events. She showed that events become more jet like with increasing energy, contrary to what one expects from a simple phase space production mechanism. Using the beam polarization, she showed that the observed azimuthal distribution of the jet axis was that expected from the production of spin 1/2 quarks that fragment into hadrons.

Roy Schwitters used muon pair production to measure the polarization of the beams in the electron-positron storage ring SPEAR. He showed that the azimuthal distribution of high momentum hadrons in hadronic final states was the same as that observed for muon

pairs, consistent with the origin of these hadrons from the fragmentation of spin 1/2 quarks.

The 1996 Robert R. Wilson Prize for Achievement in the Physics of Particle Accelerators will be presented to Albert Hofmann of CERN

For his numerous experimental techniques developed to elucidate collective phenomena in accelerators and storage rings; in particular, the experimental determination of beam impedances and methods for controlling the instabilities that limit beam intensities. His theoretical insights and experimental innovations have led directly to higher intensities in many circular accelerators and storage rings for both particle physics and synchrotron radiation production. As a superb teacher and mentor, he has been unfailingly generous in conveying his knowledge and insight to others, especially younger physicists and engineers.

The deadline for the 1997 Prize Nominations is June 14, 1996. To make a nomination, please contact the chair of the appropriate committee: Lawrence Hall (Sakurai), Gary Feldman (Panofsky), Christopher Leemann (Wilson).

New APS Fellows

The new APS Fellows in the Division of Particles and Fields will be honored at the Indianapolis meeting. The new Fellows are

James Ball
Guenter Baum
Sally Dawson
Lance Dixon
Steven Errede
Kenneth Heller
Rudolph Hwa
Paul Mackenzie
William Mann
William Molzon
Tetsuji Nishikawa
Robert Orr
Probir Roy
Serge Rudaz
Julia Thompson
York-Peng Yao

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