

# **DPF Executive Committee Meeting April APS Meeting April 16, 2005**

**Present:** H. Aihara, D. Bortoletto, M. Carena, W. Carrithers, A. Cohen, S. Dawson, S. Eno, J. Jaros, J. Lykken, H. Murayama, N. Roe, J. Womersley

**Absent:** Mike Tuts

**Visitors:** H. Aihara (JPS), Judy Franz (APS), Mike Lubell (APS), S. Olsen (DPF 2006 Organizing Committee), Jack Sandweiss (PRL), Marc Sher (CSWP)

Bill Carrithers called the meeting to order at 6:35 pm.

## **I. Chair's Report**

Bill reported that he has initiated contacts with physical societies in other regions, and he invited Hiro Aihara of the Japanese Physical Society to attend our meeting. Hiro informed us that the JPS executive committee combines the functions of both HEPAP and the DPF executive committee. They discuss scientific policy as well as general issues, but they do not report directly to their funding agency. The Director General of KEK attends their meetings.

Bill also contacted Pepe Bernabeu of the European Physical Society HEP division and had a useful discussion. EPS has position papers on topics like ownership of collaboration data, publication of scientific notes to give more individual credit. IUPAP also has a position paper on scientific authorship in large collaboration, and on women in physics. We could consider endorsing their paper. Vera Luth will make a presentation on behalf of IUPAPA on scientific authorship at the Lepton Photon meeting at Upsala, according to Hiro, who is also participating. EPS/HEPP is planning a separate session at EPS Lisbon meeting, and Pepe invited Bill to come give 10 min talk on the relationship between university groups and large laboratories in international collaboration.

There was an extended discussion of the utility publishing internal technical notes to give credit to those who really did the work in large collaborations. Some doubted that it would help with promotions, because university deans would not accept anything but journal articles. Bill will circulate the paper from IUPAP for future consideration.

Bill stated that the goals of the DPF Government Liaison committee need to be re-considered. The options are to terminate it, reconstitute it with new membership, or to re-scope it with a more attainable goal. Part of problem is that the goals were not clearly defined. One suggestion from Steve Pierson, of the APS office of public affairs, was to be a kind of subsidiary of the APS OPA to leverage DPF projects. Their office sends out emails encouraging physicists to contact their representatives, and they have an ambitious plan to establish a network of congressional contacts. One possibility that was suggested was to use the DPF to act as an organizational center for various government outreach

efforts, such as the annual laboratory user group visits to Washington.

## **II. EPP2010 Status Report**

Sally Dawson reported that the work of the NAS panel is going very well, and encouraged people to write letters with their opinions. Members of the committee who are not particle physicists are getting excited about the field. The FNAL EPP2010 meeting town hall is being organized, with feedback from SLAC EPP2010 town hall. There was discussion about whether the DPF executive committee should send a letter to the panel. It was agreed that everybody on the DPF executive committee should send an individual letter, with a cover letter from Bill.

## **III. Bylaws and Business Meeting**

Bill noted that the DPF by-laws call for an annual business meeting that is open to all. Other units do this, but the practice fell into disuse because nobody attended. Bill argued that we should either hold the business meeting, consistent with the by-laws, or amend the bylaws. Ideally, this would take the form of a town hall meeting at the DPF conference, and would include reports from the Chair and Secretary/Treasurer. But the DPF meeting only happens every other year. In alternate years, we could publish an annual report with all of the information. It was noted that many people don't really understand what the DPF is, and that we should strive for more transparency.

## **III. CWSP Presentation**

Marc Sher made a presentation on behalf of the Committee on the Status of Women in Physics (CSWP). He noted that a recently published AIP report shows that the leaky pipeline for physics as a whole is no worse for women than for men, and that men and women leave the field at same rate relative to their incoming fraction. However, anecdotal evidence suggests that it may be worse in particle physics. For example, of last 100 offers made in particle theory, only 7 were made to women, according to the theory rumor mill web page. There should have been 18, according to the fraction of women PhD's. The small numbers of women in the field has been remarked upon by both Orbach and Turner. The Division of Plasma Physics set up a subcommittee on women, and ensured that women were well represented at their divisional meetings. They also established scholarships for 3rd/4th year grad students to travel to conferences. There was a general consensus that we need to get demographic data for particle physics. Marc Sher agreed to ask the AIP for this. The annual PDG survey of the field could perhaps also be modified to include gender and ethnic information. Marcela mentioned that many young women in their 30's are concerned about balancing career and family. The possibility of organizing a workshop on this issue at an upcoming DPF meeting was discussed.

## **IV. Education and Outreach**

Hitoshi Murayama, the incoming chair of the Education and Outreach subcommittee,

made a report. He is still finding out what is going on, primarily a lot of grass roots activities organized by individuals. The other members of the subcommittee include: Inge Karliner, Liz Simmons, Mike Barnett, Marj Bardeen, Greg Snow, Judy Jackson, Neil Calder. More details of the outreach activities are included in Hitoshi's notes, appended.

## **V. DPF 2006 Meeting**

Steve Olsen reported on the plans for the DPF meeting in 2006 in Oahu. It will be a joint meeting of the Pacific Region Particle Physics Societies. It will take place from Oct. 30 – Nov. 2, and a contract with the Sheraton Waikiki has already been signed for those dates. The program committee chair and deputy chair will be S. Pakvasa, and T. Browder. Members from Japan, China, Korea, and Taiwan will be appointed. The program committee will meet in Hawaii in Sept 2005. The goal is to involve every country that touches Pacific. So far they have contacts with Japan, Korea, Canada, Taiwan, China, Australia, and Russia. The estimated attendance is: US 400+, Japan 200+, Korea, 50, plus others from additional countries. The total attendance estimate ranges from 600 - 900. Attendance at the last DPF meeting in Riverside was about 500. The budget based on 600 attendees is \$311K. The organizers expect to charge \$400 for registration, and get \$50K from sponsors (DOE, NSF, UH). Registration includes \$100 per person for a luau and banquet. The room rates range from \$185 - \$245, with some cheaper rooms in the “manor wing” for \$95. There are many cheaper hotels nearby. There was some discussion about whether it would be too expensive for students.

## **VI. DOE OHEP report**

John Womersley gave a report from DOE OHEP, using slides recently shown at FNAL by Robin Stafinn (attached). He noted that Dennis Kovar regularly talks to the DNP executive committee.

## **VII. The April APS Meeting – New Format**

Judy Franz stopped by to ask for feedback on the new format for the April meeting. There are shorter sessions, and more of a lunch break. She is currently setting up a task force on the future of the April meeting as part of outgoing President Helen Quinn's long range planning. They will discuss things like enhancements in technology for future meetings, and ask whether the April meeting serves all the purposes it might? Interfaces between divisions are some of the most exciting areas for physics, and this is what the April meeting is all about. DAP is very enthusiastic about this meeting, whereas DNP is less so. The average age at the April meeting has come down significantly, with lots of students. This is very healthy – it is good for students to reach out and meet people outside their own area. Judy asked for 2 people from DPF to serve on the task force, one who is supportive of the April meeting and one who is not. They plan to get started in the next month with a face-to-face meeting, then do the rest by conference call. The report is expected in about 6 months to a year. The chair has not yet been appointed

## **VIII. APS Office of Public Affairs Report**

Mike Lubell, head of public affairs at APS, also stopped by to report his view. The outlook for FY06, 07, 08 is problematic. In a recent meeting, Senator Domenici said he has never felt as depressed about the future of US as he does today. The federal deficit is \$653 billion, most bought out by other countries. The federal trade deficit is \$60B/month. We have tipped the scales beyond what is economically desirable. The deficit is due to \$100B spent in Iran/Iraq, \$50B for homeland security, and the rest is due to tax cuts. Every politician who tries to raise taxes has lost, so neither party is willing to do it. The White House plan is to cut discretionary domestic spending by 20% over next few years. A 10% cut is likely for science because it will be treated a bit better. Last year, the APS OPA began an effort, in association with the Nat'l Assoc of Manufacturers, Intel, Microsoft etc, to set benchmarks. See [www.futureofinnovation.org](http://www.futureofinnovation.org) for details.

In almost every respect, the US is losing the competitive battle. The statistics show that US investment in science has been sinking for the last 30 years, and include comparisons to other countries. Pain being felt across the board in almost every aspect of science. We need to call this report to the attention of every member of Congress. Lubell urged that we meet with our member of Congress. The APS OPA helped organize the user's groups of SLAC, FNAL about 3 weeks ago, they worked with light source users. Anybody who comes to Washington should contact APS. If everybody isn't on the same page, nothing will happen. The entire physical science community must stick together. Letter writing campaigns organized at the March and April APS meetings make a difference, for example by encouraging members of congress to sign the Dear Colleague letter urging increased funding for NSF and the DOE Office of Science.

## **VIII. PRL Letters Report**

Jack Sandweiss stopped by and asked for any feedback on Physical Review Letters. Submissions are growing at rate of 5% per year, while acceptance rate is holding at 35%, creating a long term problem to handle the growth. There is concern about the large number of authors on some papers. IUPAP took this up. LHC will have 4-5 pages of authors. Paul Grannis did survey of collaborations, and found that nobody wanted to change anything. Vera Luth is heading a committee that will distribute a survey and make a report. A combination paper from CDF and D0 with combined electroweak analysis had all the authors with symbols indicating whether they were CDF, D0 or members of the working group. PRL is getting close to having everything electronic. The PRL review panel conducted a review, and the report is available from [www.aps.org](http://www.aps.org). They encouraged the rejection of more papers without review, ie papers claiming perpetual motion or papers that were not suitable for PRL. They also encouraged more education and a reward for referees, as well as increasing the accessibility of papers in HEP, through better introductions, or "popular abstracts" for the press.

## **IX. Report from the APS Executive Committee Meeting**

John Jaros reported the topics discussed at the APS executive meeting. Both Marty

Blume chair of APS journals and Tom McIlrath, treasurer are stepping down at end of 2006. John Bahcall, elected President for 2006, has had to step down for health reasons so there will be a special election. The APS executive committee is working on statement regarding the contract process for LANL. Headway has been made on visas (see article by Amy Flatten in Physics Today). Old law is being used to limit number of foreign students by requiring that they establish intent to return, even students coming just to attend conferences. Legislation is pending in Senate to change this old law.

### **Appendix: E&O Activities (Hitoshi Murayama's notes)**

#### **Inga Karliner**

activities at UIUC:

1. Physics Van
2. Saturday Physics
3. Saturday Astrophysics,
4. Ask a Physicist
5. The "Whys" Guy
6. Physics 123 for Elementary Education Majors (100 students)
7. talks in museum, town, Chicago
8. Physics lab visits in Take Your Daughter & Son to Work Day
9. National Science Olympiad (Joe keynote speaker)

#### **Elizabeth Simmons**

activities at MSU:

1. Einstein Day in March  
180 high-school students and teachers  
tours (cyclotron & planetarium)  
brought their own demos  
public lecture on special relativity
2. presentation to HEPAP, article in Physics Today
3. Lyman Briggs' students do outreach to local elementary school kids

#### **Mike Barnett**

1. Creating a 3D animated film of the ATLAS experiment, its construction, how particles traversing it are detected and how physics processes (Higgs etc.) are detected.
2. Creating a new, more contemporary version of the "Fundamental Particles and Interactions" chart.
3. QuarkNet is in its 7th year with 53 institutions, 500 teachers, tens of thousands of students per year, 11 HEP experiments, etc. It is creating grid tools for students to use in analyzing data. It is now a line item in the federal budget.

4. Updating the ATLAS public webpages.
5. New ATLAS brochure in English and French.
6. Producing a DVD with the ATLAS movie in 10 languages.
7. Continuing work on the Universe Adventure website with a team of students and a teacher.
8. The History and Fate of the Universe chart was finalized after field testing and is available in placemat-size, poster-size and wallchart-size.
9. Usage of the Particle Adventure continues to increase and even more languages are being added.
10. Early work on an ATLAS "spinoff" brochure about applications derived from work on ATLAS is underway.

## **Marge Bardeen**

### At Fermilab

1. Family Open House (Held February 13, ~2000 people attended)
  - hands-on activities for midlevel students
  - talks "from" famous physicists of the past century
  - tours of the linear accelerator and X-Gallery
  - a special Ask-a-Scientist program.
2. Ask-a-Scientist - the first weekend of each month
  - Fermilab physicists answer questions and explain everything
  - meet at Fermilab's Wilson Hall
  - get a behind-the-scenes tour of Fermilab.
3. QuarkNet Detector Party - On January 26
  - the first of numerous "cosmic ray" parties that QuarkNet will hold in WYP
  - 200 students and 7 teachers from four high schools
  - made an array of 23 counters in Kuhn Barn, data collection for 16 hours
  - tour of the Lab
  - tutorial on the data portal for teachers

### In the community

1. Classroom Presentations
  - a series of nine classroom presentations
  - Topics: E&M, light and color, force and motion, cryogenics, the physics of sports, cosmic rays, spacetime and Einstein, physics in the real world, and stories of science.
2. Community Festival Booths – a booth at various community festivals
  - hands on activities
  - pass out information about the Lab
  - opportunities for kids and families to do science with FNAL

## **Greg Snow**

(APS Fellow by the Forum on Education at this APS meeting!)

1. Committee's U.S. representative to the European Particle Physics Outreach Group (EPOG) that meets twice/year.
2. CROP - the Cosmic Ray Observatory Project in Nebraska, 5th year.  
26 high schools, \$1.3M from NSF  
observed large air showers in time-coincidences among nearby schools
3. E&O Tact Leader for the Pierre Auger Observatory in Argentina  
public talks, school visits, an Auger exhibit at a science museum (Mendoza)  
official inauguration ceremony in Nov
4. Public Tour Area at the DZERO experiment at Fermilab.
5. The "SALTA" schools in Colorado (Colorado extension of CROP)  
muon background measurements in Colorado's Henderson mine
6. "EuroCosmics"  
a consortium of high school cosmic ray efforts in many European countries

### **Hitoshi Murayama**

1. Chair of the Snowmass ILC meeting E&O  
Two public lectures  
enhance ILC website <http://www.interactions.org/linearcollider>  
Quantum Universe exhibit  
Dark Matter Café  
QuarkNet Teacher workshop  
Cosmic Ray Shower Array on the mall  
Carbondale outreach to the Hispanic community  
(à la Ask-a-Scientist @ FNAL)
2. organizing Einstein lecture series in Berkeley
3. Colloquium database (hopefully ready in the summer)