

NEWSLETTER

Chair's Message

Stephen R. Lundeen

Since its founding in 1987, our Topical Group has worked to increase awareness of and support for the role of precision measurement and determinations of the fundamental constants within the wider physics community. Next year's APS Centennial Meeting in Atlanta will mark an important milestone in that effort, with the announcement of the first winner of the Francis M. Pipkin Award. This first APS award or prize to be established and sponsored by our Topical Group will recognize outstanding accomplishment by a young scientist working in the area of precision measurement and fundamental constants. Established last year as a result of the generous donations by Topical Group members and by family and friends of the late Frank Pipkin, this award will now be given in odd numbered years in perpetuity and should be a major boost to the visibility of our discipline in the physics community. The first prize winner has not yet been announced, but the selection committee reported an excellent slate of nominations was received. The official announcement of the first winner, at the Atlanta meeting, will be an exciting moment for all of us, and a special satisfaction to all of us who knew Frank Pipkin and appreciated his enthusiasm for the goals of this Topical Group. At the time of his death in 1992, Frank was about to become Chair of the Topical Group. Though he was denied that opportunity to serve, the award now established in his honor will continue to play an important role in the future of our unit.

The Atlanta meeting will also be one of the largest APS meetings ever. It is expected to exceed the combined size of the usual April and March Meetings. As an interdisciplinary topical group, we have a special interest in the future of such interdisciplinary meetings, which have fallen on some hard times in recent years. At this point, there is some uncertainty as to what form future APS meetings will take, and it is not at all clear what our Topical Group should adopt as its strategy for future Topical Group meetings. The site of our annual meeting has been the April APS Meeting, which

used to be held in Washington. It is now proposed to move this meeting to the fall, and to alternate between east coast and west coast locations, probably Baltimore/Washington and Seattle/San Francisco. In the past few years, DAMOP has met jointly with other APS divisions at this meeting in alternate years, and some of our most successful meetings have occurred in this setting. In the years when DAMOP has met separately, and also when the April meeting has not occurred in the Washington, DC area, our annual meetings have been much less successful. It now appears that DAMOP prefers to organize its own separate meetings in future years. While the (now) fall meeting of APS will still be home to the Divisions of Nuclear, Particle, and Astrophysics, we may wish to consider whether it should still be the site of our Topical Group's annual meeting. The wider question is how we can best serve the defining interests of our Topical Group. Should we continue to meet with APS, regardless of the location and participation? Should we try to arrange a joint meeting with DAMOP? Should we organize our own meetings? Should we arrange to meet jointly with other topical meetings consistent with our goals, such as the CPEM (Conference on Precision Electromagnetic Measurements) meeting? These are important questions, which will bear on the continued vitality of our

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1999 APS Centennial Meeting in Atlanta

The PMFC Topical Group is participating in four Invited Sessions at the Centennial Meeting of the APS in Atlanta on March 20-26, 1999. Three of these are part of the set of special Centennial Symposia being arranged by the APS. Geoffrey Greene is the organizer of one of these, titled "Atomic Clocks in Science and Technology", which will be cosponsored by DAMOP. We also are co-sponsors of one on "Precision Measurements in Atomic Physics: A Window into Fundamental Interactions", organized by DAMOP, and one on "The Natural Standards", organized by the Instruments and Measurement Science Topical Group. In addition, separately from the Centennial Symposia, we will share a Prize Talk session with DAMOP, in which we plan to have a talk by the winner of the first Pipkin Prize. The Topical Group will also present an exhibit on Fundamental Constants. This will include computer access to the WWW database with improved values of the constants.

Early Deadlines for the Annual Meeting!

Abstract deadlines this year are earlier than usual for the Annual Meeting. Please note that there are separate abstract deadlines for the March Program and for the April Program (which includes the sessions associated with our Topical Group). The abstract deadline for contributed papers for the April Program is **December 4, 1998**. For postdeadline posters, it is February 19, 1999. For more information, see the Centennial Meeting website, "<http://www.aps.org/centennial/>."

New Topical Group Website

The Topical Group now has a website, "<http://www.aps.org/units/pmfc/>," where bylaws, past newsletters, officer and committee contact information, and information on the Topical Group's programs can be found.

Travel Support for Young Scientists

Each year, the Topical Group provides partial travel support to several graduate students, post-docs, and recently graduated physicists to present contributed papers in the area of precision measurement and fundamental constants at the Annual Meeting of the Topical Group, usually the APS Spring Meeting. For 1999, the Annual Meeting is the APS Centennial Meeting 20-26 March. Criteria for an award include the relevance of the paper to the Topical Group and travel reimbursement needs. Participants may initiate their request for consideration by sending an additional copy of their submitted abstract to Harold Metcalf, Chair of the Topical

Group's Education Committee, Please note that your abstract must be submitted to the APS for the Spring Meeting, and you should label it for a session on precision measurement and fundamental constants. The deadline for abstract submission to the APS and for the partial travel support request is December 4, 1998. The maximum amount of an award will be \$400.

NIST Precision Measurement Grants

Applications are being solicited for two new Precision Measurement Grants, sponsored by the National Institute of Standards and Technology, to be awarded beginning Oct. 1, 1999 (Fiscal Year 2000). Each grant is in the amount of \$50,000 per year, renewable for up to two additional years, for a total of \$150,000. NIST sponsors these grants to encourage research by U.S. university and college faculty members in the field of precision measurement and fundamental constants and to foster contacts between NIST scientists and such faculty members actively engaged in such work. Candidates' pre-proposal summaries and biographical information must reach NIST by 1 February 1999, to be considered for the FY 2000 awards. For more information, contact Barry N. Taylor, Chairman, NIST Precision Measurement Grants Committee, National Institute of Standards and Technology, Building 225, Room B161, Gaithersburg, MD 20899-0001, (301) 975-4220, e-mail: barry.taylor@nist.gov.

Nominations for Fellowship

Members of the Precision Measurement and Fundamental Constants Topical Group are invited to nominate candidates for Fellowship in the APS. Our topical group is delegated the opportunity to select approximately two new APS Fellows from nominations submitted to the APS and designated as our topical group candidates. It is an important function of the Topical Group to participate in this selection procedure in order to provide recognition for significant contributions to our field of research.

A description of the mechanism for submitting a nomination to the APS and nomination forms are available at the APS Web page: "<http://www.aps.org/fellowship/index.html>." The deadline for submission of nominations for our unit is April 1, 1999.

PMFCTG nominations will be reviewed by the group Fellowship Committee which consists of Eric Adelberger, Peter Bender, and Peter Mohr. Please notify Peter Mohr, mohr@nist.gov of relevant nominations or intent to nominate someone. If suitable candidates are not identified by the membership at large, nominations will be initiated by the Fellowship Committee.

Nominations for 1999 Elections

The Nominating Committee, consisting of Linda Young (Chair), Gene Sprouse, Ernest Kessler, and Samuel Werner, presents the following slate of candidates for the 1999 elections:

For Vice-Chair (one position):

Richard Deslattes, NIST
Blayne Heckel, University of Washington

For Executive Committee Member-at-Large (two positions):

Sui-Au Lee, Colorado State University
Luis Orozco, SUNY Stony Brook
Guy Savard, Argonne National Laboratory
Anton Zeilinger, University of Innsbruck

Biographies and ballots will be distributed with the next newsletter.

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Topical Group. Please feel free to register your opinion on this question, and any other issues of concern to you to any member of the Executive Committee.

A final issue of concern is the question of Topical Group membership. In recent years, our membership has remained relatively stable at approximately 500 members. Since there is always some turnover in our membership, it's important that we encourage young scientists to join as they enter our ranks. If you know of individuals with interests in precision measurement and fundamental constants, please make an effort to enlist them for membership. Details on how to join may be found on the Topical Group website at "<http://www.aps.org/units/pmfc/>."

Current Topical Group Executive Committee

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Committee Chairs

Nominating Committee: Linda Young
Fellowship Committee: Peter Mohr
Program Committee: Peter Bender
Membership Committee: Edward Fry
Education Committee: Harold Metcalf
Centennial Unit Display Committee:
Peter Mohr

Minutes of the 1998 Business Meeting

Saturday 18 April, 1998, Columbus Ohio

Daniel Heinzen, (outgoing) Chair of the Topical Group opened the meeting at 4:35 PM. Approximately 12 members were present.

Election Results

Daniel Heinzen announced the results of the elections. Peter Mohr (NIST, Gaithersburg) was elected Vice Chair. Peter Bender (JILA/ University of Colorado) moves up to become the Chair-Elect and Stephen R. Lundeen, (Colorado State University) moves up to become the Chair. Daniel J. Heinzen (University of Texas at Austin) becomes Past Chair, replacing Geoffrey Greene (LANL), who is rotating off. Wayne Itano (NIST, Boulder) was elected Secretary-Treasurer, replacing Harvey Gould (LBNL) who is rotating off. Ralph Conti (Univ. of Michigan) and Steve Lamoreaux (LANL) were elected Members-at-Large, replacing outgoing members John Bollinger (NIST, Gaithersburg) and Priscilla Cushman, (U. Of Minnesota). The Executive Committee Members, as of the close of the Spring Meeting are

Officers

Chair: Stephen R. Lundeen, Colorado State U. (1999)
Chair Elect: Peter Bender, JILA, U. of Colorado (1999)
Vice Chair: Peter Mohr, NIST, Gaithersburg (1999)
Past Chair: Daniel Heinzen, U. Texas at Austin (1999)
Secretary-Treasurer: Wayne Itano, NIST, Boulder (2001)

Members-at-Large

Ralph Conti, U of Michigan (2001)
Edward Fry, Texas A&M U. (2000)
Steve Lamoreaux, LANL (2001)
Harold Metcalf SUNY, Stony Brook (2000)
Edwin R. Williams, NIST, Gaithersburg, MD (1999)
Linda Young, Argonne National Laboratory (1999)

The Vice Chair and two Member-at-Large positions will be balloted next year.

Treasurers Report

Harvey Gould, the outgoing Secretary Treasurer reported that as of February 28, 1998 the TG had \$7.8K in assets, an increase of approximately \$900 from last year. This increase is largely the result of there having been no students claiming the \$600 in travel support. Membership had increased slightly to about 475 members.

Pipkin Award

Stephen Lundeen reported that the Pipkin Award was now a reality. The award, which will be given every other year, is open to nominees who at the time of their nomination are less than 15 years beyond their PhD. The first nomination deadline is July 1, 1998. The Selection Committee is headed by L.W. Anderson (Univ. Of Wisconsin). Over 150 donors contributed and the total fund of \$31K is sufficient to continue the award indefinitely. Steve Lundeen and Ed Eyler were thanked with a round of applause.

Centennial Meeting

A portion of the centennial program will need to be in place early. The TG anticipates that we will have two Centennial Sessions, one on clocks, jointly with DAMOP and one on fundamental constants, jointly with the Instrumentation TG. In addition there will be one regular invited session that will feature the first Pipkin Award winner plus three other invited talks. [Note added: There will be another Centennial Symposium, cosponsored with DAMOP. See the section on the Centennial Meeting elsewhere in this Newsletter]

Fellowships

The new APS fellows, Edward E. Eyler, University of Connecticut, and Larry R. Hunter, Amherst College were announced. Ed Eyler was present and Larry Hunter will receive his certificate by mail.

New Business

A member enquired if the NIST Precision Measurement grants were still being awarded. Peter Mohr said that they were. Announcements of these grants are usually carried in the TG Newsletter.

Thanks to Dan

Outgoing Chair, Daniel Heinzen was thanked with a round of applause for a job well done. The TG on Precision Measurement and Fundamental Constants again completed a productive year.

Adjourn

The meeting was adjourned at 4:44 PM.