

SUMMER NEWSLETTER
OF THE
SOUTHEASTERN SECTION
OF THE
AMERICAN PHYSICAL SOCIETY

AUGUST 1, 1999

The 66th Meeting of the Southeastern Section of the American Physical Society (SESAPS) will be held in Chapel Hill, NC from Sunday through Tuesday, 7-9 November, 1999. Our host for this meeting will be the Physics and Astronomy Department at the University of North Carolina at Chapel Hill. The meeting is being organized jointly with the NC Section of the Materials Research Society and the Mid-Atlantic Region of the American Vacuum Society. The local arrangements committee is chaired by Thomas B. Clegg, who may be reached at (919) 843-8168 or (919) 962-2079 (phone), (919) 962-0480 (fax) and clegg@physics.unc.edu (e-mail). Dr. Clegg's address is Department of Physics and Astronomy, University of North Carolina at Chapel Hill, Chapel Hill, NC 27599-3255.

This 1999 SESAPS meeting takes place at the conclusion of a yearlong celebration of the one-hundredth anniversary of The American Physical Society. Eight months after the spectacular Centennial Meeting in Atlanta, SESAPS, one of the earliest geographic sections of APS, is pleased to mark this special year in the life of the Society. Richard Voss, who gave one of the Popular Physics Talks in Atlanta, will be our banquet speaker (on fractals and scaling in nature, culture and finance), and the great Centennial Timeline Wall Chart will be on display. A financial contribution from APS to enhance our meeting in this centenary year is gratefully acknowledged.

THIS IS THE LAST CALL FOR ABSTRACTS OF CONTRIBUTED PAPERS: SESAPS will use electronically submitted abstracts (brief instructions are at the end of this newsletter) for publication in the Bulletin of the AMERICAN PHYSICAL SOCIETY. The deadline for the receipt of contributed paper and invited paper abstracts is no later than 5:00 PM Friday, August 27, 1999. The entire program will be organized the following week. All abstracts received electronically by the deadline will be published in the November, 1999, BULLETIN of the AMERICAN PHYSICAL SOCIETY. All abstracts of contributed papers must be prepared in the standard APS format as specified in recent issues of the APS News. If the abstract is submitted to the APS only on paper, then just the title and authors will appear in the BULLETIN.

Contributions from students about research results, even at intermediate stages of completion, are strongly encouraged. Undergraduate students completing summer research projects should seriously consider this opportunity to communicate their results. The Program Chairman is:

Dr. Thomas F. Gallagher
Department of Physics
University of Virginia
Charlottesville, Va. 22901
(804) 924 6817 (Phone)
(804) 924 4576 (Fax)
tfg@virginia.edu (e-mail)

The scheduled time for your presentation must be obtained from the bulletin WHICH WILL BE AVAILABLE ELECTRONICALLY on the WWW. Meeting rooms will have an overhead projector and chalkboard - to request other audio-visual aids, including 35 mm projectors, please make your request on the abstract template. Any questions about the program should be directed to Dr. Gallagher.

THE INNOVATION FROM PREVIOUS MEETINGS IN CONTRIBUTED PAPERS WILL BE CONTINUED!

Invited papers at this meeting, as at all APS meetings, are given by experts in areas selected by the Program Committee, and these talks are usually of thirty minutes duration. Contributed papers, however, are on topics of the author's choice and are ten minutes in length. On the day following the abstract deadline, all papers are organized by sessions and the sessions into the program of the meeting. Some of the contributed abstracts are of such interest that the committee will INVITE THE AUTHORS to give a SPECIAL PAPER of twenty minutes duration on the topic of their abstract at the beginning of the contributed paper session to which their talk is assigned. **There will only be a few such papers selected.**

The invitations will be listed in the printed program of the meeting and will be verified promptly by mail to the authors. If the author(s) would like to be considered for such an invitation, they are asked to type the following statement below the abstract: If invited to do so, the author is willing to expand the talk for the above abstract to twenty minutes.

Poster Presentations:

Facilities will also be available for poster presentations, since this type of communication is common for MRS and AVS groups which will be meeting with us on Monday. If a SESAPS contributor would prefer a poster presentation, it should be noted with the following statement typed below the abstract: Poster presentation preferred. You should also check the appropriate box or fill the appropriate blank on your electronic submission form.

Abstract Submission:

Complete abstract submission instructions can be found at <<http://www.aps.org/meet/meet-abstract.html>>. Authors are strongly urged to proof their abstract carefully before submission. Contributors may submit in one of two ways:

(1) Via the web: To submit a contributed abstract using the online web submission process, an author needs to know two things: (a) the number and ordering of authors and collaborations; and (b) what to write for the abstract content. The web page will guide you through the rest. Try a test submission before submitting your abstract. Log onto <<http://abstracts.aps.org>> and select the meeting TEST. Follow the directions online to create your own practice abstract. When ready to submit your abstract online, select the meeting (SES99) by clicking on the appropriate button. A form will be created for you. Simply input the information.

(2) Via e-mail: Contributors must create their abstracts from an electronic template supplied by the American Physical Society. The template and instruction files for contributed abstracts can be obtained by sending email to <abs-request@aps.org> with the phrase REQUEST SES99 in the message. Also, see attached material at the end of this news letter.

If you have questions regarding abstract submission, please send them to abs-help@aps.org.

Audio Visual:

Meeting rooms will have an overhead projector and a chalk or white board. To request other audio-visual aids, including 35 mm projectors, please make your request in writing by typing it in the special instruction box of the abstract template. Any questions about the program should be directed to Dr. Gallagher.

THE UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL WILL BE OUR HOSTS FOR THE 1999 MEETING OF SESAPS. Fall is usually a delightful time in Chapel Hill. Colorful foliage provides a lovely backdrop to the University's activities which accommodate nearly 25,000 students. The Ackland Art Museum, the Morehead Planetarium, the North Carolina Botanical Garden, and the Southern Historical Collection in UNC's Wilson Library, are all only minutes away. Chapel Hill is also noted for its wide variety of restaurants, and for Franklin Street's numerous bookstores and shops which cater extensively to this university community. More detailed information about the town, including a detailed map of the area, can be found at <http://www.herald-sun.com/cchamber/visitors.html>.

All primary meeting sessions

will be held at the Sheraton Chapel Hill Hotel, 1 Europa Drive, Chapel Hill, NC 27514. The hotel is located on

U.S. Hwy 15/501, two miles southwest of its intersection with Interstate Highway 40 and approximately three miles northeast of both downtown Chapel Hill and the UNC-Chapel Hill campus. (On the town map found via the web page listed immediately above, Europa Drive is the short southward extension of Erwin Road, between Hwy 15/501 and Legion Road.) The guaranteed room rate is \$99, and reservations can be made by calling (800)-325-3535 or (919)-968-4900. Reservations should be made by October 1, 1999. Rooms are also available at other nearby hotels, i.e. Hampton Inn (0.5), Holiday Inn (0.7), Days Inn (1.0), Red Roof Inn (1.6), Comfort Inn (2.0), University Inn (3.0), and Carolina Inn (3.5); numbers indicate approximate distance from the Sheraton in miles. Numerous restaurants and several shopping centers are also located nearby. More detailed meeting updates and hotel information can be found at the SESAPS website, <http://energy.davidson.edu/sesaps/meetings.html>.

TRAVEL ARRANGEMENTS:

Chapel Hill is located in the southwestern corner of the Research Triangle region of North Carolina, about 13 miles southwest of Durham, and 30 miles west of Raleigh. It can be reached conveniently by automobile (I-85 to US Hwy 15/501 from the north; I-85 to I-40 from the southwest, I-40 from the west and east, and US Hwy 15/501 or I-95 and I-40 from the south). Chapel Hill is also located about 18 miles west of the Raleigh-Durham Airport, which is served by frequent convenient flights of major airlines such as US Airways, Delta, American, Midway, Northwest, United, and TWA.

MEETING PROGRAM:

Meeting registration will begin at the hotel at 10:00 am on Sunday morning, November 7th and meeting sessions will begin at 2:00 pm. The traditional COSEP meeting, when Southeastern physics department chairs share common interests and concerns, will be resurrected with a lunch at noon on Sunday. Special emphasis will also be given on Sunday to the Society of Physics Students Program (see below). On Sunday evening, the UNC-Chapel Hill Physics and Astronomy Department will host an open house followed by the traditional lecture-demonstration show on the UNC campus in Room 215 Phillips Hall. Members wishing to participate should contact Dr. Clegg for details about this program.

Invited paper sessions on the following topics are being planned: physics teaching and education, thermoelectric materials, imaging with hyper-polarized gases, physics with high-intensity lasers, nanoscale materials and imaging, physics with free electron lasers, early experimental results at the CEBAF accelerator, astrophysical facilities and instrumentation, and nonequilibrium dynamics and spatial structure. On Monday, additional sessions on novel materials fabrication, and on fabrication, processing, and characterization of wide band-gap materials, are being planned for the Materials Research and Vacuum Society program. Further information about these invited paper sessions, speakers, and titles will appear on the SESAPS website <http://energy.davidson.edu/sesaps/meetings.html> as individual sessions are organized.

The scheduled time for each presentation must be obtained from the Bulletin which will be available electronically.

THE REGISTRATION FEE STRUCTURE HAS BEEN CHANGED. In order to accommodate the electronic submission of abstracts, the executive committee of SESAPS made the following changes in the registration fee structure. It should be emphasized that a member submitting one abstract will save money with the new fee structure. Registration will be \$35.00 for SESAPS and other APS members, \$50 for nonmembers, \$5 for retired physicists and \$15 for graduate students. Awardee and banquet speakers will not pay the registration or banquet fee. Undergraduate students may register free at the Society of Physics Students' table.

REGISTRATION:

There will be no advance registration for SESAPS participants. Individuals may register for the meeting at the Sheraton Chapel Hill Hotel beginning Sunday morning, November 7 at 10:00am. Cash, personal check, and Mastercard or Visa will be accepted.

Society of Physics Students Meeting:

A separate SPS meeting for undergraduate students will be scheduled in conjunction with the SESAPS meeting. Registration, separate from the SESAPS registration and at a separate SPS desk in the hotel lobby, will begin at 1

pm on Sunday. The primary student paper session, with 10 minute oral presentations, and where the Marsh W. White Award will be given for the best, will be held on Sunday afternoon, November 7, between 2 and 6 pm. Depending on demand, alternate poster presentations may also be possible at a later session on Monday.

The SPS deadline for abstract submission will be Friday, October 29, at 5pm. The web site including instructions for abstract submission (APS format preferred) will be <<http://physics.ncsu.edu/SPS/SESAPS99>>. A sample abstract and more detailed instructions can be found there. But, please do not confuse these instructions with those for the submission of APS abstracts!. The abstracts will all be available on line, but copies will also be available at the meeting.

The primary contact person for further SPS meeting information will be Jackie Jones, SPS President at North Carolina State University <jsjones3@unity.ncsu.edu>.

A PROGRAM OF PHYSICS TEACHING DEMONSTRATIONS IS SCHEDULED FOR SUNDAY EVENING. Members wishing to participate in a teaching demonstration program should contact Dr. Clegg for details about this program. The demonstration program will be held in Room 215 of Phillips Hall on the UNC campus. There will be an open house at the Physics and Astronomy Department before the demonstration program.

A LETTER FROM THE CHAIR

The number of APS sections based on geographical location continues to grow with the recent addition to the APS of the Northwest and Four Corners Sections. A move is underway to start a California Section of the APS. This continued growth of these Regional Sections demonstrates to me that many physicists feel that there are regional physics issues as well as national ones. The Southeast Section of course has been going since about 1935 with precisely this focus as its reason for existence. The educational presentations at SESAPS meetings are one of our annual highlights and these sessions continue to grow at our Fall meeting. The Southeast has seen a major growth in research opportunities, with SESAPS members often playing a seminal role in their development. I look forward to a continuing role for SESAPS in fostering physics in the Southeast and by using our collective strength on the national effort as well.

It has been my pleasure to serve for the past year as Chair of SESAPS and I look forward to my new role of supporting Tom Gallagher as he assumes the role of Chair. I hope everyone who reads this Newsletter will get one other person to join SESAPS at the time when they renew their annual APS membership. It's free to join. Also, I look forward to seeing you this Fall at our annual meeting in North Carolina.

Kirby Kemper

TRAVEL SUPPORT WILL BE AVAILABLE FOR STUDENTS THIS YEAR. Students will be pleased to learn that modest travel grants will again be available for those presenting research papers at the SESAPS sessions. SPS students giving papers in the SPS sessions only are not eligible for travel support. Please use the form included with this news letter.

THE GEORGE B. PEGRAM AWARD FOR EXCELLENCE IN TEACHING committee has made its recommendation. The winner of the Pegram award will be announced on our home page. The Beams award committee has not made their recommendation at this time. SESAPS members are urged to nominate candidates for these awards, as a large number of candidates generally results in meaningful awards.

SUGGESTED NOMINATIONS FOR SECTION OFFICERS should be included on the election ballot, which will be mailed separately, for consideration by the Nominating Committee, which is made up of the Executive Committee.

MEMBERS SHOULD CHECK OUT THE SESAPS HOME PAGE. the home page may be found through the link from the APS home page at "HTTP://WWW.APS.ORG". Click on sections and click on southeastern. The home page is at Davidson and was put together and is maintained by our treasurer, Larry Cain. Larry would

welcome suggestions for changes to make the page more useful. Thanks Larry.

THE FOLLOWING INFORMATION WAS GENERATED BY APS TO ASSIST YOU WITH THE PREPARATION OF ELECTRONICALLY SUBMITTED ABSTRACTS

Abstract Submission

The deadline for the submission of all abstracts is Friday, August 27, 1999, 5:00 pm EST at the APS Headquarters.

** The deadline is firm, so don't wait until the last minute! Send early -save yourself the stress!

Electronic Submission

Last year, the APS instituted an electronic abstract submission process, which was an enormous success, with almost 80% of all the abstracts being submitted electronically. We are hoping for an even better turnout electronically this year. There are many advantages to submitting electronically.

- > E-mail message confirming receipt of your abstract
- > E-mail notification of the scheduling of your paper
- > The complete abstract will appear in the electronic version of the program which will be posted on the APS Home Page, well in advance of the printed program. (Abstracts submitted in paper form will have only the title and author listed in the electronic program)

For information on how to submit an abstract electronically, send an e-mail message to "abs-info@aps.org" and use the word "info" in the text of your message. To receive the template, send a message to "abs-request@aps.org" and put the words "request <ses99>" in the text of your message. The information and/or template will be returned to you by e-mail. If you have particular questions regarding the information, or need assistance, send a message to ["abs-help@aps.org"](mailto:abs-help@aps.org).

Submitting your abstract electronically is surprisingly simple. The mark-up language we use is LaTeX, but you do not need to know LaTeX in order to submit an abstract. Simple ASCII text will suffice, unless you need to put mathematical symbols or Greek characters in the text of your abstract - and most of those instructions are very simple.

Paper Submission

Abstracts received via postal mail will be accepted; however, only the title and authors of the paper will appear in the printed version of the Bulletin and on the World Wide Web version of the Bulletin.

Please follow the instructions for the preparation of paper abstracts as they appear in each issue of APS Meeting News. These abstracts should be sent to:

<ses99>=20
Meeting Abstracts
APS Meetings Department
One Physics Ellipse
College Park, MD 20740-3844

Please do NOT also send a paper abstract to APS if you are submitting your abstract electronically. All abstracts must be at the headquarters office by the deadline date. APS assumes no responsibility for mail delays. Receipt of paper abstracts will not be confirmed unless accompanied by a self-addressed, stamped envelope.

Some Electronic Do's and Don't's

Do not simply "reply" to the address from which you received the abstract template. Send the abstract to "abs-submit@aps.org". Make sure you have the correct meeting ID <ses99>.

One abstract per message! The system is automated. Sending two or more abstracts in one message increases the likelihood that all but the first abstract will disappear into the ether.

Use only one sorting category for your abstract in the "Sort Category" field. In order to sort the papers properly, it is important that the system deals only with one request. If you wish to give additional guidance to those who are putting the program together, please feel free to do so in the "Special Instructions" field. The "Sort Category" field has four curly braces. Please use them as follows:

\Sort Category {15}{L}{}{}{}. **Not** \Sort Category {15L}{}{}{}
and not \Sort Category{15}{L}{32}{B}. **Do not remove left over braces.**

Only submit your abstract once. You should receive an e-mail message telling you that we received your message within 24 hours. If you do not receive such a message then contact "abs-help@aps.org" for assistance.

THE SESAPS BALLOT

THE SESAPS BALLOT for the election of the 2000 officers is included in this mailing to be marked and returned to the SESAPS TREASURER no later than 10AM on November 8, 1999. Ballots may be returned by mail or at the meeting, but, in either case, must be in the envelope provided with your signature at the upper left. This is your opportunity to participate in the selection of the leadership for your organization. Please vote for the Vice-Chair and Member of the Executive Committee. The ballot also provides a means for input for future nominations do not hesitate to suggest yourself if you would like to participate in this way. There is also a place on the ballot where you can make contributions to the Beams and Pegram Award Funds. Such contributions are our means to continue the yearly presentation.

Respectfully,
Kenneth A. Hardy
Physics Department
Florida International University
Miami, FL 33199
(305) 348-2605 (phone), (305) 348-3053 (fax)
hardyk@servax.fiu.edu (e-mail)

Hotels in Chapel Hill North Carolina with rooms blocked for the SESAPS meeting on November 7-9: See meetings section on homepage for list.

For a map of Chapel Hill, see <<http://www.herald-sun.com/cchamber/chamber/map.html>>

SOUTHEASTERN SECTION OF THE AMERICAN PHYSICAL SOCIETY EXECUTIVE COMMITTEE 1999

See Executive Committee Section of homepage for the list of Executive Committee members.

APPLICATION FOR STUDENT TRAVEL SUPPORT TO THE SESAPS MEETING

NAME: _____

ADDRESS: _____

CITY: _____ STATE: _____

ZIP: _____

SCHOOL: _____

UNDERGRADUATE/CLASS: _____

GRADUATE/CLASS: _____

ABSTRACT TITLE: _____

ABSTRACT AUTHORS: _____

AMOUNT REQUESTED (\$100 MAX) _____

PURPOSE OF REQUESTED FUNDS: _____

RETURN BY 1 OCTOBER TO:
KENNETH A. HARDY, SECRETARY SESAPS
PHYSICS DEPARTMENT
FLORIDA INTERNATIONAL UNIVERSITY
UNIVERSITY PARK, MIAMI, FL 33199

SOUTHEASTERN SECTION
AMERICAN PHYSICAL SOCIETY
1999 BALLOT

FOR VICE-CHAIR

WALTER CROFT MISSISSIPPI STATE UNIV. _____

CHRIS LAIRD EASTERN KENTUCKY UNIV. _____

FOR EXECUTIVE COMMITTEE

BASCOM DEEVER UNIV. OF VIRGINIA _____

DAVID ERNST VANDERBILT UNIVERSITY _____

FOR SECRETARY

KENNETH HARDY FLORIDA INTERNATIONAL UNIVERSITY _____

Please list below any suggestions for future officers of the section

NAME

OFFICE

Many members of the section have made donations to the Jesse Beams Award for outstanding contributions to research and to the George Pegram Award for outstanding contributions to teaching so we want to offer an opportunity for others to contribute to the Beams-Pegram fund. Please feel free to cut this section from the ballot and use it to make your contribution by sending it to Dr. Laurence Cain, Department of Physics, Davidson College, Davidson, NC 28036. Dr. Cain will also accept contributions at the SESAPS meeting.

Name _____ Amount _____