

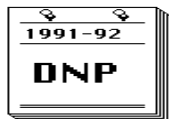
TO: Members of the Division of Nuclear Physics, APS
FROM: Virginia R. Brown, LLNL - Secretary-Treasurer, DNP

ACCOMPANYING THIS NEWSLETTER :

Spring APS Meeting Invited Speaker Nomination Form (See Item 2).

23-27 October DNP Meeting, Michigan State University, East Lansing, MI Information:

- General Information (See Item 1).
- Epitome.
- List of Invited Speakers.
- Epitomes of the Workshops.
- Double-sided Preregistration and Housing Form including Workshops and Banquet.
- Local map of meeting area.



FUTURE DEADLINES

- **1 Sept. 1991** - Nominations for 1992 Dissertation Award (See Item 5).
- **1 Sept. 1991** - Nominations for 1992 Bonner Prize (See Item 6).
- **1 October 1991** - Last day for MSU Fall Meeting 'Special' Preregistration Rates, Full Registration Refunds, and Guaranteed Hotel Rates.
- **1 November 1991** - Invited Speaker Nomination Form for APS Spring Meeting.
- **1 April 1992** - Nominations for APS Fellowship (See Item 4).

1. DNP FALL MEETING, AT MICHIGAN STATE UNIVERSITY, EAST LANSING, MICHIGAN, 23-27 OCTOBER 1991

The Annual Fall Meeting of the Division of Nuclear Physics will be held October 23-27, 1991 on the campus of

Michigan State University in East Lansing, Michigan. All sessions of the meeting will be held in the Kellogg Center, an on-campus conference center and hotel. The hosts for the meeting and its associated workshops will be the National Superconducting Cyclotron Laboratory, the Department of Physics and Astronomy, and Michigan State University.

Michigan State University has over 43,000 students on its beautiful campus in central-lower Michigan. Founded as a pioneer land-grant institution in 1855, MSU has expanded its early concentration on agricultural science to now include more than 200 programs of undergraduate and graduate study, and has over 2000 faculty members in 14 colleges. Among the many attractions on campus are the Wharton Center for Performing Arts, the Beal Botanical Gardens, the Kresge Art Center, the MSU Museum, the Abrams Planetarium, and many acres of natural area.

The main divisional meeting, held Thursday-Saturday, will consist of a plenary session, five sessions of invited papers, and 22 sessions of contributed papers. There will also be a DNP "Town Meeting" and meetings of Users' Groups of various laboratories. Overhead projectors will be provided for all sessions, with slide projectors also available for invited talks on request.

Meeting Program

The meeting consists of six sessions of invited papers, one of which is a plenary session. Speakers for two invited sessions were selected by the Program Committee using nominations from the DNP membership. These speakers have been arranged into two sessions "Nucleon and Nuclear Structure" and "Nuclear Astrophysics" by the DNP Program Chair, Wick Haxton, (Univ. of Washington). Two other invited sessions are on topics selected by the Program

Committee at the Washington meeting. One session on "Recent Polarization Experiments", based on suggestions from several committee members, was arranged by P. Stoler (Rensselaer). Another session with the title "A Massive Neutrino in Nuclear Beta Decay?" was organized by A. E. Champagne (Univ. of North Carolina). A fifth invited session on "Phase Transitions in Nuclear Reactions" was arranged by the Local Committee.

The 232 contributed abstracts were arranged into 22 sessions by M. Auderheide, C. Chin, S. Kreiger, G. Mathews, K. van Bibber of LLNL and R. Firestone, K. Gregorich, H. Mathis, and G. Wozniak of LBL. The chairpersons of the invited sessions were selected by the Program Committee. The arrangers selected chairpersons for the contributed sessions mainly from suggestions from the Local Committee.

Plenary Session

Now that the "Long Range Plan" for nuclear physics is in place, the DNP Fall meeting Plenary Session has changed its focus somewhat. The first "New Style Plenary Session" was at Urbana Champaign in October 1990 and had the title "Nuclear Physics in Society." The topic for the East Lansing meeting is "Nuclear Physics at the Interfaces." The Plenary Session will be held on Thursday at 13:30 in Big Ten Room A of the Kellogg Center. The DNP Chair, G. M. Crawley (MSU) will chair the session. The three speakers and their topics are Trevor C. Weekes (Whipple Observatory), "Very High Energy Neutral Particles from Cosmic Point Sources?", David Schramm (Univ. of Chicago), "New Vistas in Nuclear Astrophysics: Neutrino Masses, Phase Transitions, and the Big Bang" and Luther Williams (National Science Foundation), "State of Science and Engineering Education: The Role of Nuclear Scientists." Each talk will be 40 minutes long with 10 minutes for discussion.

"Town Meeting"

As part of a continuing effort to provide timely information to the DNP membership and to provide a forum for public comment on issues that affect our field, the Division will hold a one-hour "town meeting" style business meeting at 16:00, Friday afternoon. Reports on progress in the framing of the new DNP Constitution and Bylaws, a report on recent NSAC activities, and updates from the funding agencies, DOE and NSF, will be presented.

Pre-conference Workshops, 23 October

Two workshops are planned for Wednesday prior to the main meeting. The topics are "Intensity Interferometry in Sub-Atomic Physics", organized by George Bertsch and Konrad Gelbke, and "Physics with Radioactive Ion Beams", organized by David Morrissey and Brad Sherrill. The

programs for these workshops will include a review of current areas of activity for a general nuclear physics audience, including students, and will not be solely for specialists.

The workshop on "Intensity Interferometry in Sub-Atomic Physics" will evaluate the techniques used to extract information about the source size and duration from correlation measurements in nuclear reactions. Following general talks there will be specific contributions discussing the validity of the theoretical approximations and presenting new results and planned experiments.

The workshop on "Physics with Radioactive Ion Beams" will review the current status and future prospects for science with radioactive beams. Emphasis will be given to a review of the results of completed experiments and the improvements and prospects for experiments using the next generation of radioactive beam facilities. Discussions of experiments using reaccelerated beams and beams produced and used at high energy will be included. A preworkshop will be held on Tuesday to discuss the progress in plans for a dedicated North American radioactive ion-beam facility.

Post-conference Workshop, 27 October

A workshop is also planned for Sunday following the main meeting, on the topic: "Nonlinear Dynamics in Nuclear and Accelerator Physics," organized by Wolfgang Bauer, Martin Berz, and Mel Month. This workshop will be more specialized than the others, and will involve the participation of the Division of Beam Physics. The purpose will be to explore applications of new mathematical methods in areas of mutual interest to these two groups.

Welcoming Reception

A Welcoming Reception is planned for Wednesday evening 23 October from 19:00-22:00 in the Big Ten Room of the Kellogg Center.

Registration Desk

Registration for the DNP Meeting will take place at the Welcoming Reception, Wednesday evening in the Lobby of the Kellogg Center, next to the main hotel desk. This registration desk will be open from 19:00-22:00 on Wednesday and on Thursday morning from 8:00-12:00. At later times, registration and other details will be taken care of at the Conference Office in the Vista Room of the Kellogg Center. Workshop registrants can also register for the DNP meeting from 8:00-9:00 Wednesday morning.

No formal companions' program is offered, but information about activities and points of interest in the area will be available.

Reception and Banquet

The DNP Fall Reception and Banquet are planned for Friday evening in the Big Ten Room of the Kellogg Center. The Banquet is optional and extra at \$25.00. The Reception begins at 18:30 and the Banquet begins at 19:30.

NSCL Tour and Reception

There will be an open house at the National Superconducting Cyclotron Laboratory from 19:00 to 22:00 on Thursday. Tours of the facility will be available. During the open house, a light buffet and drinks will be available in the Atrium. Shuttle buses will be operated to take participants from the conference hotels to the NSCL and return.

Users' Group Meetings

17:00, Thursday, 24 October - The IUCF Users' Group Meeting will be held in Room 104B. The HHIRF User's Group Meeting will be held in Room 105A. The Bates Users' Group Meeting will be held in Room 106.

18:00, Thursday, 24 October - The "88-Inch" Users' Association Meeting will be held in Room 102. The RHIC Users' Group Meeting will be held in Room 105B. There will be a meeting at Room 104A of the Kellogg Center for those interested in plans for the proposed pion linac (PILAC) at Los Alamos.

19:30, Thursday, 24 October - The Isospin Laboratory Initiative (ISL) to promote a proposal for intense radioactive beams in North America will have a Users' meeting in the Seminar Room of the National Superconducting Cyclotron Laboratory. This meeting will take place during the open house at the NSCL.

17:30, Friday, 25 October - The ATLAS Users' group Meeting will be held in Room 102. The NSCL Users' Group Meeting will be held in Room 104A. The CEBAF Users' Group Meeting will be held in Room 105A.

High School Teacher's Day

The Division of Nuclear Physics in concert with the APS Education Office is planning a special day for High School Teachers on Thursday, 24 October. The program will consist of lectures by noted physicists and demonstrations by high school teachers for high schoolers. A luncheon and handout materials are planned.

Parking and Shuttle Buses

The conference will operate a morning and evening shuttle, but there will not be continuous service. If you drive, be prepared for parking charges at the session site. Parking at the Kellogg Center is free only for overnight guests; those driving from other hotels or commuting to Kellogg Center pay a maximum of \$5 per day for parking.

Registration and Meals

Preregistration fees for the 3-day main meeting are \$80 for APS members, \$150 for nonmembers, and \$10 for retired and student members. After October 1, 1991 the corresponding fees are \$100, \$170, and \$15, as indicated on the registration form. Registration fees for the workshops are \$20, increasing to \$25 after October 1, with the fees being waived for students. Complete and mail the registration form with payment. Make your check payable in U.S. dollars to Michigan State University. Allow one week for your return confirmation.

For immediate confirmation of registration, use your VISA/MasterCard by telephone, (800) 447-3549 [in Michigan (800) 462-0846] or FAX (517) 353-3900.

Written cancellations, by preregistrants postmarked prior to October 1, 1991, will be refunded. No refund will be allowed for withdrawal postmarked after October 1, 1991. If you fail to attend the program and do not notify Engineering Lifelong Education, you are liable for the entire fee.

Meals are available both at Brody Residence Hall and at Kellogg Center. Brody is a student residence hall immediately across Harrison Road from Kellogg. Lunch at the Brody cafeteria is all you can eat at a fixed price of \$5.04 tax included. Physicists at past conferences have been pleased with the quality and quantity of Residence Hall food. Kellogg Center is the University's showpiece food service. Lunch at Kellogg is served and is very good, but more expensive at \$12 gratuity and tax included. You may choose either facility on any one day by checking the blanks on the preregistration form. Brody and Kellogg meals must be reserved in advance to assure a place. Only a very limited number of lunch tickets will be available on-site.

NOTE: The program break for lunch is fairly short. The most efficient way to eat lunch is to select either Brody cafeteria or Kellogg group meals. Public restaurants are about a 15 minute walk from Kellogg Center.

Coffee and rolls will be available each morning. If you prefer a full breakfast, the public dining rooms in Kellogg and in the Holiday Inn both offer a wide selection. There is a restaurant adjacent to University Inn as well. Brody Residence Hall also offers breakfast at a fixed price; tickets are available at the individual

residence hall reception desks. All of these facilities are open by 7:00 a.m. At registration a restaurant guide to the area will be provided.

Lodging

The Fall Meeting will use four hotels, with a limited amount of additional student housing. Rates and services vary. All hotel rooms should be reserved via the registration form attached by October 1, 1991, to qualify for the conference rates. The order of hotels listed below reflects proximity to the program sessions. The room rates quoted below are subject to an additional 5% county room tax and to an additional 4% Michigan sales tax. The Kellogg Center is exempt from the county tax, but 4% sales tax will be added. If your first choice hotel is full, a reservation will be made where space is available in the order you specify on the form.

Kellogg Center is the University Conference Center and the site of all sessions. The Center is also a full service hotel which has just completed a twenty million dollar renovation and has become a campus showpiece. Kellogg will honor the Federal per diem for hotels: the rates per night are \$51 single occupancy, \$55 double occupancy. Sales tax will be added to the rates. Kellogg has a public restaurant and a cafeteria. Kellogg is the appropriate choice for those who wish maximum convenience in access to sessions. One hundred-fifty rooms are available.

Holiday Inn at University Place is in downtown East Lansing about three quarters of a mile from Kellogg Center. This new facility opened in the Fall of 1988 and it offers all the services of Holiday Inns everywhere, including an indoor pool. The rates are \$63 per night single or double occupancy. The county room tax and sales tax will be added. The Holiday Inn has a public restaurant. Parking fees are waived for overnight guests. The Holiday Inn is most convenient for shopping. One hundred-forty rooms are available.

University Inn is near the Interstate I-496 exit on Trowbridge Road about one mile from Kellogg Center. University Inn is a motel: each room has a direct outside entrance. The rates are \$32 per night single occupancy, \$34 double occupancy. The county room tax and sales tax will be added. There is no charge for parking. While University Inn does not operate a food service, three restaurants and several fast food places are within a block. University Inn is convenient for motorists. One hundred rooms are available.

Quality Inn is on Grand River about one and one-half miles from Kellogg Center. The Quality Inn has been renovated and converted to enclosed entrances; the pool is also enclosed. The rates are \$46 per night single occupancy, \$55 double occupancy. The county room tax and the Michigan sales tax will be added to these rates.

There is no charge for parking. Quality Inn has a restaurant. This hotel is close to a shopping center, and to Interstate I-496 and US-127. Seventy rooms are available.

Student housing is available in Butterfield Guest House on a very limited basis. Butterfield is immediately across Harrison Road from Kellogg Center. If you will be a full time student in October 1991, and you wish further information, check the appropriate box on the registration form and an application will be mailed back to you. If student housing is filled, a reservation will be made at the facility you stipulate on your form.

Travel and Airfare Discounts

East Lansing is located about 80 miles west of Detroit and the nearby Lansing Airport is served by several major air carriers. The MSU Campus is about a 20-minute taxi ride from the airport. A map is included.

Northwest Airlines is the "Official Airline" of the 1991 meeting of the Division of Nuclear Physics. **Through a contractual agreement with Spartan Travel of East Lansing, Michigan, meeting participants wishing to fly into Lansing may receive a discount of either 45% off Northwest Airlines applicable round trip coach fare, or an additional 5% off their lowest applicable restricted round trip fare available at the time of booking.** To make air reservations and obtain these discounts, please call Spartan Travel toll-free (800) 456-2238 between 8:30 AM and 5:30 PM EST and identify the group code G103 and state attending "Nuclear Physics Conference". These discounts do not apply to international travel, except that some discounts are available for flights from Canada.

Local Committee

Members of the Local Committee are Sam Austin, Walter Benenson, George Bertsch, Gary Crawley, and Jerry Nolen (Chair).

For further program information please contact the Local Conference Coordinator: Mrs. Shari Conroy, National Superconducting Cyclotron Laboratory, Michigan State University, East Lansing, MI 48824. Telephone: 517-353-5971 FAX: 517-353-5967 Bitnet: Conroy@MSUNSCL

For further information in regard to registration, meals and housing contact: Engineering Lifelong Education, 173 Engineering Building, Michigan State University, East Lansing, MI 488241226, Telephone (800) 447-3549 or, in Michigan, (800) 462-0846.

2. SPRING APS MEETING, WASHINGTON, D.C., 20-23 APRIL 1992

The Division of Nuclear Physics will organize five sessions of invited papers for the Spring meeting. The 1991 Program Committee listed below will arrange two or three sessions of invited papers on topics selected at their 23 October MSU East Lansing meeting. Suggestions for topics are welcome and should be sent with reasons for their choice (before 23 October) to the 1991 Program Committee Chair, Wick C. Haxton. Additional information such as proposed talks with names of possible speakers for your proposed topic sessions would also be useful. The remaining sessions are selected by vote of the Program Committee from suggestions for individual speakers from the DNP membership. The composition of the voted sessions relies on the nominations from the entire DNP community; **you are urged to participate in this process.** The nomination form for individual speakers, which is included with this newsletter, should be mailed to W. C. Haxton as early as possible before the 1 November deadline.

The DNP Program Committee as listed in the May Newsletter was incomplete. The corrected list is given below.

Wick C. Haxton, Univ. of Washington, Chair
 James B. Ball, ORNL, (Past Chair, 1989)
 Gerard Crawley, Mich. St. Univ., (Past Chair, 1990)
 Virginia R. Brown, LLNL
 Aron Bernstein, MIT
 Arthur E. Champagne, Univ. of N. Carolina-Chapel
 Jolie A. Cizewski, Rutgers Univ.
 Jerry D. Garrett, ORNL
 Donald F. Geesaman, Argonne
 Benjamin F. Gibson, LANL
 Joseph N. Ginocchio, LANL
 Cynthia Gossett, Univ. of Wash.
 Bernhard A. Mecking, CEBAF
 Berndt Müller, Duke Univ.
 Brian D. Serot, Indiana Univ.
 Philip J. Siemens, Oregon State Univ.
 Johanna Stachel, SUNY
 Paul Stoler, Rensselaer
 James P. Vary, Iowa State Univ.
 Jochen K. Wambach, Univ. of Ill.
 Gordon J. Wozniak, LBL

In addition to its usual five sessions at the Spring Meeting, the DNP will organize joint sessions with the Division of Particles and Fields, the Division of Astrophysics, the Division of Beam Physics, and the Few-Body Topical Group. If you have suggestions for these joint sessions, please contact someone on the Program Committee.

3. FUTURE DNP FALL MEETINGS

The fall meetings for the next three years are as follows:

1991	October 23-26	E. Lansing, MI
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1992	October 14-17	Santa Fe, NM
1993	October	Asilomar, CA

The dates include the Wednesday "workshops", which are held in conjunction with the DNP fall meetings. Holding "workshops" at the DNP fall meetings has become a tradition which began with the 1986 Vancouver meeting. All meeting attendees are welcome and encouraged to come. It has been the intention of the DNP Executive Committees that these "workshops" should have broad appeal, with introductory pedagogical talks for the benefit of those who have come primarily for the DNP meeting but want to take the opportunity to learn about a field of specialty of the local community.

Members interested in hosting the 1994 DNP meeting at their institution should write to G. M. Crawley before the 1991 DNP Fall Meeting at East Lansing.

4. NOMINATIONS FOR APS FELLOWSHIP

The procedure for the election of a Member to Fellowship is outlined in the Membership Directory of the APS under "Constitution and Bylaws." A nomination form, which cites the principal contributions of the candidates to physics, should be prepared and signed by two members of the society. The total number of members who could be elected to Fellowship in a given year is one half of one percent of the total APS membership.

The DNP deadline is normally **1 April**. Nomination forms are available from Ms. Evelyn Bernstein (The American Physical Society, 335 East 45th Street, New York, NY 10017). Completed forms should be returned to Dr. N. R. Werthamer at the same address.

The 1992 DNP Fellowship Committee is comprised of J. B. Ball, (Chair), E. G. Adelberger, F. E. Bertrand, Jr. and E. J. Moniz. The Fellowship Committee reviews the nominations for APS fellowship referred to the DNP and recommends a slate of candidates which is forwarded to the DNP Executive Committee and then to APS Council for approval.

It is particularly important for nominators to ensure that the cases which they prepare for the Fellowship Committee are well documented. In addition to that requested on the nomination form, information such as lists of invited talks, awards, professional activities, committee services, and participation in organization of conferences is very helpful. Inclusion of a complete publication list is highly recommended.

The DNP has adopted the following Fellowship Criteria Guidelines. To be chosen as a Fellow, an APS member should: 1) have a record of excellence in research that has been sustained several years, and 2) have done at

least one major, original work that has influenced his/her speciality in a distinctive way.

The list of APS Fellows (by APS subunit) elected in a given year is published in the February Bulletin the following year. The names of newly elected DNP Fellows are published in the February newsletter and the awards are presented at the DNP Business meeting of the Spring APS meeting.

5. 1992 DISSERTATION AWARD IN NUCLEAR PHYSICS

Purpose: To recognize biennially a recent Ph.D. in nuclear physics.

Nature: The Award consists of \$1,000 and an allowance for travel to the annual Spring meeting of the Division of Nuclear Physics of the American Physical Society at which the award will be presented.

Establishment and Support: This award was established in 1985 by members and friends of the Division of Nuclear Physics of the APS.

Rules and Eligibility: Nominations are open to any person who has received a Ph.D. degree in experimental or theoretical nuclear physics from a North American university within the two-year period preceding the deadline.

Send before *1 September 1991* the name of the proposed candidate, a summary of up to four pages of the thesis research, a statement of his/her contribution to it as well as that of others, and a letter of support from the physicists who are familiar with the candidate and the research. To expedite the process, copies of the thesis should be made available for the five Committee members. This information is required and should be sent to Professor Gerard M. Crawley, Physics Astronomy Department, Michigan State University, East Lansing, MI 48824.

6. NOMINATIONS FOR 1992 TOM W. BONNER PRIZE IN NUCLEAR PHYSICS

This annual prize was established in 1964 as a memorial to Tom W. Bonner by his friends, students and associates. Previous winners are: H. H. Barschall, R. J. Van de Graaff, C. C. Lauritsen, R. G. Herb, G. Breit, W. A. Fowler, M. Goldhaber, J. D. Anderson and D. Robson, H. Feshbach, D. H. Wilkinson, C. S. Wu, J. P. Schiffer, S. T. Butler and G. R. Satchler, S. Polikanov and V. M. Strutinsky, Roy Middelton and W. Haeberli, R. M. Diamond and F. S. Stephens, B. L. Cohen, G. E. Brown, C. D. Goodman, H. A. Enge, E. G. Adelberger, L. M. Bollinger, B. Frois and I. Sick, R. H. Davis, E. M. Henley, V. W. Hughes, and P. Twin.

Send the name of a proposed candidate with supporting information and a proposed citation before *1 September 1991* to: H. C. Britt, Chair, E-Division, Lawrence Livermore National Laboratory, L-289, Livermore, CA 94550.

7. BUDGET REPORT FROM THE NUCLEAR SCIENCE RESOURCES COMMITTEE, L. L. Riedinger, Jr. Chair

The President's budget request for fiscal year 1992 (beginning October 1, 1991) was submitted to Congress in early February and has been moving through the Congress since. The Department of Energy funds for Nuclear and High Energy Physics are appropriated through the Energy and Water Bill, which has now progressed through both the House and the Senate. In the House, the Nuclear Physics request of \$342.4 million (a 9% increase over FY91) was approved in full, including construction funds of \$49.4 M for RHIC and \$31.8 M for CEBAF. The Senate committee added to this an extra \$12 M for CEBAF, including \$10 M for construction (to help avoid a delay in the projected FY94 completion) and \$2 M for equipment. In addition, both reports included language instructing the department to maintain operation of the three heavy-ion accelerators at national laboratories (Argonne, Berkeley, and Oak Ridge) with funds allocated in the Nuclear Physics budget.

The House cut \$100 M from the SSC request, still leaving an increase from \$242.9 M in FY91 to \$433.7 M in FY92. The Senate restored \$75 M of this House cut. In High Energy Physics, the House had eliminated in committee \$43.5 M for the Fermilab main injector, but then restored \$10 M as a full body. The Senate then added an additional \$15 M for this purpose. As a result of these additions, the Senate number for General Science (Nuclear and High Energy Physics) is \$102 M higher than the House. Later in the summer a conference committee will have to resolve these differences.

The requested increase for the National Science Foundation is 17.5% to a level of \$2.72 billion. This funding is contained in the VA, HUD, and Independent Agencies Appropriations Bill, which always give rise to a competition for funds between NSF and big-ticket programs like NASA, Veterans' Affairs, and Housing and Urban Development. The final House bill contains the full request for NSF minus only \$1.2 M, but does some rearrangement of priorities. The Research program was given \$1960.5 M, \$3 M below the request. However, the request for \$23.5 M to begin construction of the \$211 M LIGO (Laser Interferometer Gravitational Wave Observatory) was reduced to only \$0.5 M, with some of these funds being redirected to astronomy research support. As is usually the case, the request for Education and Human Resources was increased, this time from

\$390 M to \$435 M. The new proposed \$50 M program for Academic Research Instrumentation was killed and replaced with \$20 M for a continuation of the academic research facilities modernization program.

Fireworks were abundant in the House concerning the Space Station in the NASA budget. The Appropriations Committee had voted to remove all but \$100 M of the \$2.1 billion request for the space station. But, the full House voted for an amendment to add back \$1.9 B for the space station, freezing all other NASA science programs at FY91 levels. Work in the Senate is still in committee, and so the fate of the NSF and NASA requests is not yet clear.

The DNP Nuclear Science Resources Committee is resurrecting the program of regular electronic mail messages to interested members. If you have not received such a budget update by e-mail recently but would like to in the future, please send a message to Gary Crawley at crawley@msupa.bitnet.

8. ANNUAL REVIEWS OF NUCLEAR AND PARTICLE SCIENCE

The Division has continued the agreement with Annual Reviews, Inc., which will enable DNP members to obtain copies of the "Annual Review of Nuclear and Particle Science" at a 30% discount when purchased through the DNP Secretary-Treasurer, Virginia R. Brown, Lawrence Livermore National Laboratory, P. O. Box 808, L-288, Livermore, CA 94550.

1991 Prices: In what follows the price for U.S.A. and Canada is before the slash; the price for "Other Countries" follows the slash. Volume 40 was published in December 1990. Volume 40 is \$55/\$60 retail and \$39/\$42 for DNP members. Vols. 38-39 are \$51/\$56 retail and \$36/\$40 for DNP members. Vols. 12-37 are \$36/\$41 retail and \$26/\$29 for DNP members.

Beginning in **1992**, there will be a new price structure which represents an increase for back volumes. Volume 41 (**not available until after publication in Dec. 1991**) will not show an increase over the 1991 Vol. 40 price. Vols. 12-41 will be \$55/\$60 retail and \$39/\$42 for DNP members. Another change for **1992** is that all Canadian orders will be priced under "Other Countries" rather than the current pricing under "U.S. and Canada." This is in addition to the 1991 Canadian General Sales Tax (see below).

Other Annual Reviews are also available. Payment (payable to the Division of Nuclear Physics-APS) must accompany your order and must be in U.S. funds. California orders must add applicable sales tax. *Since 1 January 1991, all orders shipped to Canada require the addition of a 7% General Sales Tax.* The order should

include the address of the DNP member to whom the volume will be mailed (fourth class book rate). Books will be shipped directly from Annual Reviews, Inc.

9. FUTURE CONFERENCES

Organizers of future conferences should contact the DNP Secretary-Treasurer if they wish their conferences listed in DNP newsletters.

"Hadron '91 4th International Conference on Hadron Spectroscopy" to be held 12-16 August 1991 and preceding this a "Summer Course on Hadron Spectroscopy" to be held 5-9 August at the Univ. of Maryland, College Park, MD. [For further information contact: D. C. Peaslee, University of Maryland, College Park, MD 20742, phone: (301) 405-6070, bitnet: "hadron91@umdhep", telex: 887-294, fax: (301) 699-9195].

"The Fourth Chemical Congress of North America" to be held 25-30 August 1991 in New York City. Symposia include "Nucleus-Nucleus Collision Mechanisms," "Ion-Solid Interactions," and "Neutrino Science: Recent Advances", to be held 26-27 August. [For further information contact: S. W. Yates, Univ. of Kentucky, Lexington, KY 40506, bitnet: "YATES@UKCC, or Dr. R. L. Hahn, Brookhaven National Laboratory, Upton, NY 11973, bitnet: "RHAHN@BNLDAG".

"Second International Conference on On-Line Nuclear Orientation and Related Topics", to be held 16-19 October, 1991 at Oak Ridge, TN. [For further information contact: Ken Krane, Physics Dept. Oregon State Univ. Corvallis, OR 97331, Phone: (503) 753-4569, fax: (503) 737-1683, e-mail: "Kranek@physics.orst.edu"].

"The 2nd Annual October Astrophysics Conference in Maryland, Testing the AGN Paradigm," to be held Oct. 14-16, 1991 at College Park, Maryland. [For further information please contact: Astrophysics Conference, USRA, Code 610.3, Goddard Space Flight Center, Greenbelt, MD 20771, phone: (301) 286-5057, e-mail "(SPAN) NSSDCA::USRA]."

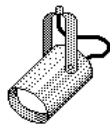
"Ninth International Conference on Ultra-Relativistic Nucleus-Nucleus Collisions--Quark Matter 1991", 11-15 November 1991, to be held in Gatlinburg, TN, USA. [For further information contact: Dr. Frank Plasil, Oak Ridge National Laboratory, P.O. Box 2008, MS-6372, Oak Ridge, TN 37831, phone (615) 574-4711, fax (615) 576-2822, bitnet: "qm91@orph01"].

"A Workshop on the 17 keV Neutrino Question", to be held 18-20 December 1991 at The Center for Particle Astrophysics (CfPA) at the University of California, Berkeley, CA. [For further information contact: Dr. Timothy Edberg, Center for Particle Astrophysics, 301 LeConte Hall, University of California, Berkeley, Berkeley, CA 94720, phone: (415) 642-1067, fax: (415) 642-1756, Internet: "edberg@lbl.gov", bitnet: "edberg@lbl"].

"Eighth Winter Workshop on Nuclear Dynamics", January 18-25, 1992, to be held in Jackson Hole, Wyoming. [For further information contact: Wolfgang Bauer, NSCL/Cyclotron Laboratory, Michigan State Univ., E. Lansing, MI 48824, phone: (517) 353-5965, fax: (517) 353-5967, bitnet: "bauer@msunscl"].

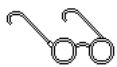
"Baryons '92; International Conference on the Structure of Baryons and Related Mesons", to be held 1-4 June 1992 at Yale University, New Haven, CT. [For further information contact: Moshe Gai, Physics Dept., Yale University, 272 Whitney Ave., New Haven, CT 06511, phone: (203) 432-5195, fax: (203) 432-3522, bitnet: "gai@yalevm"].

"1992 International Nuclear Physics Conference" to be held July 26 to August 1, 1992 in Wiesbaden, Germany. [For further information contact: Prof. Rudolf Bock, International Nuclear Physics Conference, GSI, P.O. Box 110552, D-6100 Darmstadt 11, Germany, phone: 49 6151 359-888 and 359-889, fax: 49 6151 359-989, telnet: 04-19593, bitnet: "INPC@DDAGS13"].



DNP MEMBERSHIP DUES, FALL MEETING REGISTRATION, AND DNP OPERATING FUNDS

The Division of Nuclear Physics is a subunit of the American Physical Society. The APS annual billing requires that you pay dues of \$5.00 in order to remain a member of the DNP. The two primary sources of revenue for the DNP are the dues and the proceeds from the fall meeting. The two primary expenditures of the DNP are the newsletters and the September Bulletin charges. The newsletter costs have been reduced by using bulk mailing rates. The only revenue for the fall meeting is that obtained from the registration fees. The expenditures are many, the principal one being the September Bulletin, the cost of which has gone up in recent years to about \$9000. The registration fee for the DNP fall meeting is less than the general APS meeting fees. It is the intention of the Executive Committee to keep these fees as low as possible. *Please support the DNP by paying your dues and registration fees; they are truly needed.*



ANNOUNCEMENT

The Steering Committee of the Annual Nuclear Physics Summer School would like input from the community on future topics, sites, and potential chairpersons. Please communicate your suggestions to:

Phil Siemens, Physics Dept., Oregon State University, 301 Weniger Hall, Corvallis, OR 97331-6507, phone (503) 737-1697, fax (503) 737-1683, e-mail: "siemens@physics.orst.edu."

DNP INVITED SPEAKERS
FALL MEETING
MSU - E. Lansing, MI
23-27 October 1991

The meeting consists of six invited sessions, one of which is a plenary session, on Thursday, Friday, and Saturday at Michigan State University, East Lansing, MI. All invited sessions will be held in the Auditorium of the Kellogg Center.

9:00 - Thursday Morning - 24 October

AA A Massive Neutrino in Nuclear Beta Decay?, B. Sur, presiding.

- B. Kayser (National Science Foundation), "Physics of a 17-keV Neutrino"
- J. J. Simpson (Univ. of Guelph), "The Unbearable Heaviness of Neutrinos"
- A. Hime (Univ. of Oxford), "Evidence for a 17-keV Neutrino in the Beta Decay of ^{35}S and ^{63}N "
- F. Boehm (Caltech), "Absence of Evidence of Massive Neutrinos from Spectrometer and Oscillation Experiments"

13:30 - Thursday Afternoon - 24 October

PA Plenary Session: Nuclear Physics at the Interfaces, G.M. Crawley, presiding.

- T. C. Weekes (Whipple Observatory), "Very High Energy Neutral Particles from Cosmic Point Sources?"
- D. N. Schramm (Univ. of Chicago), "New Vistas in Nuclear Astrophysics: Neutrino Masses, Phase Transitions, and the Big Bang"
- L. Williams (National Science Foundation), "State of Science and Engineering Education: The Role of Nuclear Scientists"

9:00 - Friday Morning - October 25

BA Phase Transitions in Nuclear Reactions, W. Bauer, presiding.

- A. Hirsch (Purdue Univ.), "Evidence for the Observation of Critical Behavior in Finite Nuclei from Nuclear Multifragmentation Experiments"
- D. R. Bowman (Michigan State Univ.), "Multifragment Disintegrations of Heavy Systems"
- X. Campi (Universite Paris-Sud, Orsay), "Searching for a Phase Transition in Nuclear Multifragmentation"
- B. Jacak (LANL), "Nuclei at High Energy Density - Recent Results from Heavy Ion Experiments"
- T. Matsui (Indiana Univ./MIT), "Diagnosing Collective Plasma Behaviors in Superdense Hadronic Matter"

13:30 Friday Afternoon - 25 October

CA Spin Observables in Nuclear Reactions, P. Stoler, presiding.

- O. Hauser (Simon Fraser Univ./TRIUMF), "Interactions of Pions and Protons with Polarized ^3He "
- R. M. Laszewski (Univ. of Illinois), "Use of Tagged Polarized Photons to Probe M1 and E2 (T=1) Strength Distributions in Heavy Nuclei"
- W. Turchinets (MIT/Bates), "Spin Observables and the Deuteron Elastic Form Factors"
- J. M. Knudson (LANL), "Measurement of Neutron Deformation in ^{165}Ho Using the (π^+, π^0) Reaction"

9:00 - Saturday Morning - 26 October

DA Nucleon and Nuclear Structure, J. Ginocchio, presiding.

- V. R. Brown (LLNL), "Nucleon-Nucleon Bremsstrahlung: Off-Energy-Shell Effects and Meson-Exchange Currents"
- J. Schmiedmayer (Harvard Univ.), "The Electric Polarizability of the Neutron"
- T. Hatsuda (Univ. of Washington), "QCD Sum Rules in the Nuclear Medium"
- A. Hayes (LANL), "The Structure of the Exotic Neutron-Rich Nucleus ^{11}Li "

13:30 - Saturday Afternoon - 26 October

EA Nuclear Astrophysics, S. Austin, presiding.

- A. Garcia (Univ. of Washington), " β^+ -decays of ^{37}Ca and the Efficiency of the ^{37}Cl Solar Neutrino Detector"
- A. B. Balantekin (Univ. of Wisconsin), "Solar Neutrinos: Theoretical Prospects"
- J. Cooperstein (Univ. of Washington), "The Influence of Nuclear Equation of State and Electron Capture Reactions on Supernova Explosions"
- A. Champagne (Univ. of N. Carolina, Chapel Hill), "Nuclear Spectroscopy, Radioactive Beams, and Explosive Nucleosynthesis"

EPITOME OF THE DNP MEETING
MSU, E. Lansing, MI
23-27 October 1991

(Chairpersons are in parentheses. Names without initials indicate invited speakers. Meeting Rooms 102, 104A, 104B, 105A, 105B, the Big Ten Room, and the Auditorium are in the Kellogg Center).

19:00-22:00 - Wednesday Evening, 23 October

Registration and Reception, Kellogg Center Lobby and Big Ten Room.

9:00 - Thursday Morning, 24 October

- AA** A Massive Neutrino in Nuclear Beta Decay? Kayser, Simpson, Hime, Boehm. (B. Sur) - Auditorium.
- AB** Heavy-Ion Reactions I: Low Energy. (M. R. Thoennesen) - Room 105A.
- AC** Theory I: Mean Field, Quarks, and QCD. (L. Wilets) - Room 105B.
- AD** Neutron Physics. (J. Rapaport) - Room 104A.
- AE** Few-Nucleon and Polarization Physics. (J. R. Beene) - Room 104B.

13:30 - Thursday Afternoon

- PA** Plenary Session: Nuclear Physics at the Interfaces. Weekes, Schramm, Williams. (G. M. Crawley) - Big Ten Room A

Thursday Evening

- 17:00 IUCF Users' Group - Room 104B.
- 17:00 HHIRF Users' Group - Room 105A.
- 17:00 Bates Users' Group - Room 106
- 18:00 "88-INCH" Users' Association - 102.
- 18:00 PILAC Working Group - Room 104A
- 18:00 RHIC Users' Group - Room 105B
- 19:00-22:00 Reception and Tour at NSCL
- 19:30 Isospin Laboratory Initiative (ISL) Meeting - NSCL Seminar Room.

9:00 - Friday Morning, 25 October

- BA** Phase Transitions in Nuclear Reactions. Hirsch, Bowman, Campi, Jacak, Matsui. (W. Bauer) - Auditorium.
- BB** Electron Scattering and Photonuclear Reactions. (A. M. Nathan) - Room 105A.
- BC** Theory II: Intermediate Energy. (C. J. Horowitz) - Room 105B.
- BD** Instrumentation I. (A. Zeller) - Room 104A.

- BE** Astrophysics. (G. J. Mathews) - Room 104B.
- BF** Nuclear Structure I: $A < 40$. (C. N. Davids) - Room 102.

13:30 - Friday Afternoon

- CA** Spin Observables in Nuclear Reactions. Hüsler, Laszewski, Turchinets, Knudson. (P. Stoler) - Auditorium.
- CB** Heavy-Ion Reactions II: Intermediate Energy. (L. G. Sobotka) - Room 105A.
- CC** Theory III: Heavy-Ion Reactions. (T. Matsui) - Room 105B.
- CD** Weak Interactions and Astrophysics. (B. A. Brown) - Room 104B.
- CE** Nuclear Structure II: $40 < A < 100$. (R. W. Hoff) - Room 102.

16:00 - Friday Afternoon

- PB** **Town Meeting.** Ball, Hendrie, Lightbody (G. M. Crawley) - Auditorium.

- 17:30 Atlas Users' Group - Room 102.
- 17:30 NSCL Users' Group - Room 104A.
- 17:30 CEBAF Users' Group - Room 105A.

Friday Evening

- 18:30 Reception, Big Ten Room.
- 19:30 Banquet, Big Ten Room.

9:00 - Saturday Morning, 26 October

- DA** Nucleon and Nuclear Structure. Brown, Schmiedmayer, Hatsuda, Hayes. (J. N. Ginocchio) - Auditorium.
- DB** Heavy-Ion Reactions III: Low-Energy. (B. B. Back) - Room 105A.
- DC** Theory IV: Nuclear Structure Models. (M. Harvey) - Room 105B.
- DD** Instrumentation II. (F. Marti) - Room 104A.
- DE** Heavy-Ion Reactions IV: Ultra-Relativistic. (R. P. Sharenberg) - Room 104B.
- DF** Nuclear Structure III: $120 < A < 170$. (A. Arahamian) - Room 102.

13:30 - Saturday Afternoon

- EA** Nuclear Astrophysics. Garcia, Balantekin, Cooperstein, Champagne. (S. M. Austin) - Auditorium.
- EB** Heavy-Ion Reactions V: Intermediate Energy. (G. J. Wozniak) - Room 105A.
- EC** Light-Ion Reactions. (J. Finck) - Room 104A.

ED Weak Interactions. (S. Freedman) - Room 104B.

EE Nuclear Structure IV: $A > 170$. (K. T. Hecht) - Room 102.

**TOPICS AND SPEAKERS FOR THE WORKSHOPS
TO BE HELD 23 AND 27 OCTOBER AT MICHIGAN
STATE UNIVERSITY IN CONJUNCTION WITH THE
DNP FALL MEETING.**

Two workshops are planned for Wednesday, October 23, prior to the main meeting. Registration will begin at 8:00 AM in the lobby of the Kellogg Center, and the workshop sessions will commence at 9:00 AM, also in the Kellogg Center. The programs for these workshops will include a review of current areas of activity for a general nuclear physics audience, including students, and will not be solely for specialists.

A workshop is also being planned for Sunday, October 27, following the main meeting. This workshop will be more specialized than the others, and will involve the participation of the Division of Beam Physics. The purpose will be to explore applications of new mathematical methods in areas of mutual interest to these two groups.

WORKSHOP A

PHYSICS WITH RADIOACTIVE ION BEAMS

Wednesday, October 23.

Lincoln Room A, Kellogg Center

Organizing Committee: D. J. Morrissey and B.M. Sherrill

Recent experiments with radioactive beams have greatly stimulated experimental and theoretical interest in the field. Interest has also been stimulated by the prospects for new high intensity radioactive beam facilities. Emphasis will be on a review of the physics from completed experiments and the improvements and prospects for science using the next generation of radioactive beam facilities. Discussions of experiments using reaccelerated beams and beams produced and used at high energy will be included.

Note: People interested in this workshop are also invited to an informal meeting related to the North American Isospin Laboratory radioactive beam initiative being held at the Kellogg Center on Tuesday afternoon, October 22.

SESSION 1

Chairperson: D. Vieira

9:00 WA1 Nuclear Structure Opportunities with Radioactive Beams, R.F. CASTEN, Brookhaven National Laboratory

9:45 WA2 Astrophysical Studies with Radioactive Ion Beams, R.N. BOYD, Ohio State University

10:30 Break

11:00 WA3 Studies of Nuclei far from Stability, J. HARDY, AECL, Chalk River

11:45 WA4 Nuclear Reactions with Radioactive Ions, H. ESBENSON, Argonne National Laboratory

12:15 WA5 Prospects for High Intensity Radioactive Ion Beams, J.M. NITSCHKE, Lawrence Berkeley Laboratory

12:45 Lunch

SESSION 2

Chairperson: W. Benenson

14:00 WA6 Experiments with the Fragment Separator and Storage Ring at GSI, E. ROECKL, Gesellschaft für Schwerionenforschung (GSI), Germany

14:45 WA7 Recent Developments and Results on Exotic Nuclei at GANIL, D. BAZIN, Centre d'Etudes Nucléaire, Bordeaux, France

15:30 Break

16:00 WA8 Nuclear Physics Studies with the RIPS Fragment Separator, M. ISHIHARA, University of Tokyo, Japan

16:45 WA9 Elastic Scattering and Exclusive Reaction Cross Section Measurements with Exotic Nuclear Beams, J.J. KOLATA, Notre Dame University

WORKSHOP B

INTENSITY INTERFEROMETRY IN SUB-ATOMIC PHYSICS

Wednesday, October 23.

Lincoln Room B, Kellogg Center

Organizing Committee:

G.F. Bertsch and C.K. Gelbke

The workshop on intensity interferometry will evaluate the techniques used to extract information about the source size and duration from correlation measurements in nuclear reactions. The main emphasis will be on two-particle correlations in heavy ion collisions, considering all energy regimes. Following general talks there will be specific contributions discussing the validity of the theoretical approximations and presenting new results and planned experiments.

SESSION 1

Chairperson: Barbara Jacak

9:00 WB1 Viewing heavy ion collisions with interferometry, SCOTT PRATT, *University of Wisconsin*

10:00 Break

10:30 WB2 Heavy ion reactions viewed by nucleon-nucleon correlations, JOSEF POCHODZALLA, *GSI, Darmstadt, Germany*

11:15 Boson interferometry in high energy physics, THOMAS HUMANIK, *University of Pittsburgh*

12:00 Lunch

SESSION 2

Chairperson: C.K. Gelbke

14:00 Contributed Papers

WORKSHOP C

NONLINEAR DYNAMICS IN NUCLEAR and ACCELERATOR PHYSICS

Sunday, October 27.

Lincoln Room, Kellogg Center

Organizing Committee:

W. Bauer, M. Berz, and M. Month

Nonlinear dynamics is gaining increasing importance in accelerator physics as well as in nuclear and many-body physics. It is the goal of this workshop to present an overview of activities in the two subfields, to stimulate discussions, to enable exchange of ideas, and to provide a chance for cross-fertilization.

SESSION 1

Chairperson: Jerry Nolen

9:00 WC1 The Impact of the Chaos Revolution on Nuclear Physics, MICHEL BARANGER, *MIT*

9:45 WC2 Objects and Algebras in Beam Physics, LEO MICHELOTTI, *Fermilab*

10:30 Break

10:45 WC3 Is Chaos a Meaningful Concept in Quantum Mechanics?", D.H. FENG, *Drexel Univ.*

11:30 WC4 Long Term Behavior of Nonlinear Hamiltonian Systems, ALEX DRAGT, *University of Maryland*

12:15 Lunch

SESSION 2

Chairperson: Aurel Bulgac

14:00 Contributed Papers

16:00 Break

SESSION 3

Conveners: Ed Heighway, Gary Mitchell and Mel Month

16:30 Round Table Discussion