



NEWSLETTER NO. 85

1 February 1991

**TO: MEMBERS OF THE DIVISION OF NUCLEAR PHYSICS, APS
FROM: VIRGINIA R. BROWN, LLNL, SECRETARY-TREASURER, DNP**

ACCOMPANYING THIS NEWSLETTER :

- Nuclear wallet cards (See item 10).

22-25 April APS meeting, Washington, DC:

- A listing of the Symposia of the DNP, the invited speakers, and titles of their talks.

24-26 October DNP Meeting, East Lansing, MI

- A nomination form for invited speakers.
- A pre-registration form which includes workshops and banquet.
- A housing form.
- Poster.

FUTURE DEADLINES



- 1 April 1991 - APS Fellowship Nominations (See item 9).
- 3 May 1991-Nomination forms for invited speakers for the East Lansing, Michigan meeting.
- 21 June 1991- Contributed Abstracts for the East Lansing, Michigan fall meeting (See item 7).
- 1 Sept. 1991-Nominations for 1992 Dissertation Award (See item 4).

1. RESULTS OF ELECTION: OFFICERS AND EXECUTIVE COMMITTEE FOR 1991

By the deadline date of January 18, 1991, 802 properly identified ballots were received for the election of officers and members of the Executive Committee. The results of the election are as follows: Wick C. Haxton was elected Vice-Chairman and Virginia R. Brown Secretary-Treasurer for one year terms. Richard F. Casten, Stuart J. Freedman, and Lee L. Riedinger were elected to two-year terms on the Executive Committee. The counting of the ballots was supervised by Tellers, Clayton Chinn, Ned Dairiki, Luisa

Hansen, Karen Pangelina, Dave Resler, Craig Sangster, and Betty Voelker, all of LLNL. The members of the 1991 Executive Committee (terms end at the Spring APS meeting following the year indicated in parentheses) are as follows:

Gerard M. Crawley, Michigan State University, Chair (1992)
Wick C. Haxton, University of Washington, Vice-Chair (1992)
Virginia R. Brown, LLNL, Secretary-Treasurer (1992)
Gerald T. Garvey, LANL, Division Councillor (1993)
John Cameron, IUCF (1992)
Richard F. Casten BNL (1993)
James B. Ball ORNL, Past-Chair (1992)
Stuart J. Freedman, Argonne (1993)
Noemie Benczer-Koller, Rutgers University (1992)
Lee L. Riedinger, University of Tennessee (1993)
Peter D. Parker, Yale University (1992)

2. COMMITTEES OF THE DNP

The terms of some of the members of the following DNP committees expire in April 1991: Program, Fellowship, Nominating, Nuclear Science Resources, and "Physics News". Suggestions from the DNP membership for new members of these committees are welcome and should be sent to James B. Ball. Members of the new committees will be listed in the May newsletter.

3. 1991 BONNER PRIZE WINNER

Prof. Peter Twin, University of Liverpool, Liverpool, England, has been awarded the 1991 Tom W. Bonner Prize in Nuclear Physics. The citation reads as follows:

"For the discovery and characterization of super-deformed nuclear states at very high spin. His leadership in the development of Compton-suppressed germanium detector arrays has been a crucial factor in the development of this new area of nuclear structure".

Professor Twin will present the Bonner Prize lecture entitled, "Superdeformed Nuclei: Present Status and Future Prospects" at the Spring APS Meeting in Session A2 at 8:00 am on Monday in the Center Salon of the Ramada Renaissance Techworld Hotel. The 1991 Bonner Prize Committee consists of James Symons (Chm.), Chip Britt (V. Chm.), Gerry Garvey, Ernest Henley and Dan Miller.

4. 1992 DISSERTATION AWARD IN NUCLEAR PHYSICS

Dissertation Award Announcement

Supported by members and friends of the Nuclear Physics Division

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 Nuclear Physics Division.

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, and a statement of his/her contribution to it as well as that of others. 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.

5. NEW DNP FELLOWS

The following DNP members are newly elected Fellows of the APS:

Jolie A. Cizewski
Thomas W. Donnelly
Miklos Gyulassy
Stanley B. Kowalski
Kenneth S. Krane
Marcos Moshinsky
Fred Petrovich

Leo L. Riedinger
Lee Schroeder

6. SPRING APS MEETING, WASHINGTON, D.C., 16-19 APRIL 1991

The Division of Nuclear Physics has arranged five symposia of invited papers for the Spring meeting. In addition, Joint Symposia with the Division of Particles and Fields, the Division of Particles and Beams, the Division of Astrophysics and the Few Body Systems Topical Group have been organized. The times locations and titles of these sessions along with the speakers and the titles of their talks are included with this newsletter.

The Business Meeting of the DNP is scheduled for 5:00 pm **Wednesday, 19 April** in the **Auditorium** of the Ramada Renaissance Techworld Hotel.

- A. Fellowship Awards
- B. Invited Sessions for the DNP Fall Meeting at Michigan State University.
- C. Budget Updates and Other Matters Reports and Discussions with DOE and NSF Representatives
- D. New Officers of the DNP
- E. New Organization of the APS and How it Impacts the DNP.

7. DNP FALL MEETING , 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.

Divisional Meeting October 24-26, 1991

The main divisional meeting, held Thursday-Saturday, will consist of a plenary session, five sessions

of invited papers, and approximately 18 sessions of contributed papers. There will also be a business meeting of the Division 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.

A welcoming reception is planned for the evening of Wednesday, October 23, and a banquet will be held Friday evening, October 25, both in the Kellogg Center. No formal companions' program is offered, but information about activities and points of interest in the area will be available.

Pre-conference Workshops October 23, 1991

Two workshops are planned for Wednesday prior to the main meeting. The topics are "*Intensity Interferometry in Nuclear Reactions*", 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 Nuclear Reactions*" 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 pi-pi and p-p 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.

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 October 27, 1991

A workshop is also being 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.

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.

The Fall Banquet is in Kellogg Center on October 25. The banquet is optional and extra at \$25. Other dinners are on your own; at registration a restaurant guide to the area will be provided.

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.

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 the hotels are listed in below reflects proximity to the program sessions. 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. The room rates quoted below are subject to an addition 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. Parking fees are waived for overnight guests; those driving from other hotels or commuting to Kellogg pay a maximum of \$5 per day parking. 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 occupancy, \$73 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.

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.

Abstracts for Contributed Papers

In order to provide sufficient time for printing abstracts in the APS Bulletin, the deadline for contributed abstracts is June 21, 1991. Abstracts should conform to APS Bulletin format and be sent in triplicate to the Secretary/Treasurer of the Division of Nuclear Physics: Dr. V. R. Brown, Lawrence Livermore Laboratory, Box 808, L-297, Livermore, CA 94550. For express mail services such as Federal or Emery use 7000 East Avenue in the address in place of Box 808. Please do NOT send abstracts to the APS Headquarters. Abstracts received by Dr. Brown after the deadline cannot be included in the program.

Further details and the final program for the meeting and workshops will be given in the September Bulletin. Members of the local committee are Sam Austin, Walter Benenson, George Bertsch, Gary Crawley, and Jerry Nolen (chairperson).

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.

8. FUTURE DNP FALL MEETING

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

1991	October 23-26	E. Lansing, MI
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 J. B. Ball before the 1991 Spring meeting.

9. 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 1991 DNP Fellowship Committee is comprised of R. A. Eisenstein (Chair), F. E. Bertrand, Jr. and H. E. Jackson. 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 (see Item 5) and the awards are presented at the DNP Business meeting (see Item 6) of the Spring APS meeting.

10. DNP MEMBERSHIP BENEFITS

Included with this newsletter is the July 1990 edition of the "Nuclear Wallet Cards". This booklet, which was last published in 1985, presents selected properties of all known nuclides and some of their isomeric states. Thanks are due to J. K. Tuli and others at the the National Nuclear Data Center at BNL, who are the principal contributors.

Accompanying the July newsletter, DNP members received the "1990 Directory of Nuclear Physics Laboratories". The Directory is produced under the sponsorship of the DNP/APS and the National Nuclear Cyclotron Laboratory at Michigan State University. It was printed by the National Nuclear Data Center at BNL.

In addition to benefits like these, DNP members receive four newsletters per year. Besides the news about DNP/APS meetings, future conferences, fellowships, prizes and awards, budgets, isotope supplies, etc., the newsletter includes ballots for nominating invited talks, nominating and electing

officers, and providing suggestions for other DNP and APS committee members. Only members can vote for or be candidates for officers of the DNP.

The size of the DNP membership is a significant factor in how well the DNP can represent the interests of the nuclear physics community. A recent example of this representation was the role of the DNP in organizing "town meetings" for input from the community into the "Long Range Plan" for nuclear physics, provided by NSAC and requested by the DOE and NSF. The interests of the nuclear physics community are also represented by the DNP in the APS. The number of APS Councillors per Division depends on the size of the subunit membership in the new APS constitution and by-laws. The size of the DNP membership is dangerously close to the edge, below which only one Councillor would be allowed. If you are on the edge about rejoining, please do it now. It would be especially valuable for the DNP's ability to represent the interests of the nuclear physics community in the APS.

The DNP membership is currently about 3/4 of its previous value. You may want to encourage your graduate students and colleagues to join, or you may want to reinstate your own DNP membership, to do so get in touch with the membership department at the New York office of the APS.

11. NUCLEAR SCIENCE ADVISORY COMMITTEE (NSAC) NEWS, Jim Ball

NSAC met on November 29, 1990, in Washington, D.C., with the main order of business to receive the expanded report that had been requested of the Heavy-Ion Facilities Subcommittee. Peter Parker, subcommittee chair, presented the report and outlined briefly some of the additional detail that had been requested. The summary and conclusions of the report remained unchanged (see detailed discussion in the November 1990 Newsletter).

Following committee and public discussion, NSAC voted unanimously to accept the subcommittee report. After further committee discussion, NSAC endorsed the findings of the report by a vote of 9 for, 3 against, with 1 abstention and 1 recusement. In responding to the NSF/DOE charge, the NSAC report will contain a discussion of the impacts noted by the subcommittee that would result to the field from the closure of any of these facilities. It also notes the problems created by the lack of adequate funding. In specific response, the NSAC transmittal states:

"All three laboratories presently maintain programs in low energy nuclear science and strongly merit support. Therefore, NSAC strongly recommends that all three facilities continue operation. In view of the

widespread shortage of operating funds that affects almost all facilities in the field, continued operation of the three facilities would require an adequate increase in the DOE operating budget." "If additional operations funding for this area of nuclear physics cannot be found, phasing out one facility appears to be unavoidable. Such a phaseout should be done in accordance with the findings of the Subcommittee" (i.e., the facility at risk would be the Holifield facility at ORNL) "and carried out in an orderly fashion. To insure continued scientific vitality of this subfield, the remaining national and university facilities must be able to take over the strongest of the displaced programs. This will require an increase in funding for operation and user support." This report has now been transmitted officially to the agencies.

In the only other item of business, the agencies requested of NSAC a review of the Nuclear Data Program which is operated by the DOE Nuclear Physics Program. The charge to the committee reads as follows:

NSAC is requested to review the national nuclear data needs and formulate specific recommendations by which these needs can be met in a most effective manner in a period of budget constraints. In this review NSAC is requested to address the following:

Identify the communities that are expected to have significant nuclear data needs in the coming decade. This should include:

- Clearly specifying new communities or other developments that might alter the priorities of data activities.
- Evaluating the relevance and completeness of the program in view of current technical developments and national priorities addressed by DOE.

With a knowledge of the breadth and needs of the community of nuclear data users expected in the 1990's, the review should recommend:

1. Ways in which the broad range of communities can participate most effectively in the nuclear data program and in particular how the user communities can collaborate with DOE in carrying out the program by sharing appropriate responsibilities, resources, and expertise.
2. Steps the data program might take to enhance its relevance, timeliness and efficient distribution of resources and an appropriate balance between the following components of the program:
 - Measurement
 - User Availability (Evaluation, Compilation, and Dissemination)
 - Theory

3. An appropriate level of program effort devoted to fundamental underpinnings that include nuclear modeling and theoretical treatment of data uncertainties.
4. Ways in which DOE's Nuclear Data Program can be enhanced by involvement in international collaborations and bodies.
5. Ways in which the program can respond to:
 - Opportunities for technical training and education
 - Cooperative efforts with other DOE programs.
6. Mechanisms for developing a continuing process for future assessments and provision of periodic input to DOE program managers regarding new and emerging needs, priorities, and opportunities for cooperation.

The chairman of NSAC recommended that a subcommittee be formed to accomplish this review and that Dr. Wayne Cassatt (NIST) head this effort. NSAC approved these recommendations. Peter Paul, as NSAC chair, and Dr. Cassatt will work together in recommending the subcommittee membership.

12. NATIONAL INSTITUTE FOR NUCLEAR THEORY, Ernest Henley

In connection with the forthcoming Summer 1991 program of the Seattle-based Nuclear Theory Institute, on "Nucleons and Nuclear Structure," there will be a Summer School from July 1-12. It is particularly suited to advanced graduate students and young researchers. Interested individuals should apply to Dr. Nathan Isgur at CEBAF
(e-mail:Isgur@CEBAFVAX).

13. BUDGET REPORT FROM THE NUCLEAR SCIENCES RESOURCE COMMITTEE, L. L. Riedinger, Chairperson

As discussed in the previous newsletter, the FY91 appropriations bills (the current fiscal year) were finally completed and signed in late October. The National Science Foundation increase over FY90 came to 11% (to a budget level of \$2316 million), and of that the Research and Related Activities budget received a 6.4% increase of funds. The Physics Division received a 4.6% increase, including 6.3% for Elementary Particle Physics (to \$42.33 million), 2.4% for Nuclear Sciences (to 43.0), 4.9% for Atomic, Molecular, and Optical (to 15.0), 4.3% for Theory (to 18.15), and 7.3% for Gravitational Physics (to 11.05).

In the Department of Energy, the FY91 budget for Nuclear Physics is \$314 million, up 8% over FY90. At this writing, the breakdown of this budget is not yet clear in view of the \$17 million general reduction that was inflicted on the program at the last minute in the late October budget resolution. Up until that time, the DOE request of a 14% increase had been approved by both the House and Senate. More details on the overall

science budget picture are given in *Physics Today*, December, page 53.

The process for FY92 begins in early February when President Bush submits the request to the Congress. In late October of 1990, the Congress not only passed the various appropriations bills but established a five-year budget plan that will lead to smaller increases for scientific research. This budget agreement tries to reduce the deficit by putting ceilings on growth in discretionary parts of the federal budget. This will limit increases for non-defense discretionary spending to 6% in budget outlays for FY92 and 5.6% for FY93. And, at this time the impact of the Persian Gulf war on these caps is not known.

14. 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 elsewhere 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.

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. 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.

15. FUTURE CONFERENCES

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

"*International Conference on Spin and Isospin in Nuclear Interactions*", 11-15 March 1991, to be held in Telluride Colorado. [For further information contact: Scott W. Wissink, Indiana University Cyclotron Facility, 2401 Milo B. Sampson Lane, Bloomington, Indiana 47408, phone: (812) 855-9365, fax: (812) 855-6645, e-mail: "wissink@iucl".]

"*IVth Conference on the Intersections between Particle and Nuclear Physics*", May 23-29, 1991, to be held in Tucson, AZ. [For further information contact: Ms. Elaine

Zukowski, Bldg. 510F, Brookhaven National Laboratory, Upton, NY 11973-5000, phone: (516) 282-3866, fax: (516) 282-5820, bitnet: "henp@bnldag"].

"National Summer School on Nuclear Physics", 16-28 June 1991, to be held in Madison, Wisconsin, USA. [For further information contact: Prof. Baha Balantekin, Dept. of Physics, University of Wisconsin, Madison, WI 53706].

"Real Time Computer Applications in Nuclear, Plasma and Particle Physics," June 24-28 1991, sponsored by the Nuclear and Plasma Sciences Society of the IEEE (preceded by a short course). [For further information contact: K. D. Mueller, KFA Julich, D-5170 Julich, W. Germany, bitnet: "mueller@djukfa52" or US contact: Richard Kouzes, Princeton University, phone: (609) 258-4343, email: "kouzes@pupcyc.princeton.edu"].

"1991 Gordon Research Conference on Nuclear Physics", July 22-26, 1991, at the Tilton School, Tilton, New Hampshire. [For further information contact: James P. Vary, Physics Dept., Iowa State University, Ames, IA 50011, phone: (515) 294-8894, fax: (515) 294-0689, bitnet: "jvary@alisuvax"].

"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].

"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"].



Dear Former DNP Members,

If you are one of the 280 former members, who elected not to maintain your DNP membership in 1990, we miss your support and invite you to rejoin the Division of Nuclear Physics. To encourage you in this direction, we are sending you this free newsletter and all the enclosures.

See item 10 for a number of good reasons to continue to be a member of the DNP. If we have convinced you, you can reinstate your DNP membership or join for the first time by getting in touch with the Membership Department at the New York Office of the APS or simply by checking the appropriate box on the 1991 APS bill and adding \$5 to your check.

We are looking forward to seeing your name back on the roster!!

Sincerely,

Virginia R. Brown
DNP Secretary-Treasurer

APS Meeting - Washington, D.C.
24-26 April 1991

SYMPOSIA OF THE DNP
(Ramada Renaissance Techworld Hotel)

8:00 Monday, Center Salon (DNP). **A2. NEW METHODS FOR EXPLORING NUCLEAR STRUCTURE, J. Cizewski, presiding.**
P. Twin (Univ. of Liverpool), Tom W. Bonner Prize Winner, "Superdeformed Nuclei: Present Status and Future Prospects".

- D. P. Balamuth (Univ. of Penn.), "In Beam Gamma-ray Spectroscopy of Neutron-Rich Light Nuclei".
 R. B. Wiringa (Argonne), "Variational Monte Carlo Calculations of Light Nuclei".
 C. Holbrow (Colgate Univ.), "Sub-Doppler Resolution Laser Induced Nuclear Orientation of ^{85}mRb ".

- 11:00 Monday, Center Salon. (FB/DNP). **B2.**
CLUSTER PHYSICS, F. S. Levin, presiding.
 A. M. Eiro (Univ. of Lisbon), "D-State Information from Light Nuclei Transfer Reactions".
 H. P. Blok (Vrije Univ. de Boeelaan and NIKHEF-K), "The Cluster Structure of ^6Li Studied by ($e,e'\alpha$) Reactions".
 D. R. Lehman (George Washington Univ.), "The Three-Body Cluster Structure of ^6Li ".
 H. R. Weller (Duke Univ.), "Radiative Capture of Deuterons on Light Nuclei".
 H. M. Hofmann (Univ. of Erlangen-Nürnberg), "Resonating Group Calculations and the Structure of Light Nuclei".

- 14:30 Monday, Center Salon. (DNP). **C2. SYMMETRY TESTS AND REACTION MECHANISMS, J. L. Matthews, presiding.**
 J. D. Bowman (LANL), "Parity Non-Conservation in Neutron-Nucleus Interactions".
 G. Dodson (MIT), "Measurement of Parity Violation in the Elastic Scattering of Polarized Electrons from ^{12}C ".
 C. Gossett (Univ. of Wash.), "Hard Photon Production in Heavy Ion Collisions".
 J. B. McClelland (LANL), "Polarization Transfer from the Neutron Time-of-Flight Facility at LAMPF".
 E. B. Norman (LBL), "Evidence for the Emission of a Massive Neutrino in Nuclear Beta Decay".

- 8:00 Tuesday, Center Salon. (DNP). **E2.**
SUPERDEFORMATION AND SYMMETRIES IN NUCLEI, P. Twin, presiding.
 P. A. Butler (Univ. of Liverpool), "Nuclei with Reflection Asymmetric Shapes".
 D. Radford (Chalk River Labs.), "Structure and Feeding Mechanisms of Superdeformed Bands".
 M. P. Carpenter (Argonne), "Lifetimes Measurements and the Characterization of Superdeformation in the $A = 190$ Region".
 M. A. Deleplanque (LBL), ""Identical" Bands and Quantized Alignment in Superdeformed Nuclei".
 W. Nazarewicz (Univ. of Warsaw), "The Physics of Superdeformation".

- 8:00 Wednesday, North Salon. (DNP). **I1. NUCLEAR PHYSICS AT MEDIUM AND HIGH ENERGY, J. Stachel, presiding.**
 J. G. Cramer (Univ. of Wash.), "Charged Pion Hanbury-Brown-Twiss Interferometry with Large Ultra-Relativistic Sources".
 J. Moss (LANL), "Probing the Nuclear Antiquark Sea Via High-Mass Muon Pair Production".
 J. Millener (BNL), "Hypernuclear Structure".
 R. D. Ransome (Rutgers Univ.), "Multi-particle Production in Pion Absorption".

- 11:00 Wednesday, North Salon. (DPF/DNP). **J1.**
COMPOSITE NATURE OF NUCLEONS, NUCLEI, AND BARYON SPIN, R. Holt, presiding.
 K. Heller, (Univ. of Minn.), "Hyperon Polarization: A Tool to Investigate the Strong Interaction".

- R. G. Milner (MIT), "Spin Structure of the Nucleons: The New Experiments".
 R. Jaffe (MIT), "Spin Structure and Strangeness of the Nucleon".
 M. Adams (Univ. of Illinois at Chicago), "Measurement of Nuclear Structure Functions at Small x ".

- 14:30 Wednesday, Center Salon. (DAP/DNP). **K2.**
NUCLEAR ASTROPHYSICS, M. Leising, presiding.
 H. A. Bethe (Cornell Univ.), "Convection Effects in Supernovae".
 S. Woosley (Univ. of Calif., Santa Cruz), "Neutron Star Formation and the R-Process".
 G. J. Matthews (LLNL), "Nuclear Astrophysics Away from Stability: The Need for Radioactive Ion Beams".
 D. Lamb (Univ. of Chicago), "Expected Impact of GRO on Gamma Ray Astronomy".

17:00 Wednesday, Auditorium.
DNP BUSINESS MEETING.

- 19:30 Wednesday Evening, North Salon.
 (DAP/DNP/DPF). **L1. PARTICLES FROM SPACE, B. Kayser, presiding.**
 T. Weeks (Harvard Smithsonian Center for Astrophysics), "The Sky at TeV Energies and Beyond".
 J. Stone (Boston Univ.), "Muon Astronomy with the MACRO Detector at Gran Sasso".
 J. F. Wilkerson (LANL), "The Case of the Missing Solar Neutrinos: Initial Results from the Soviet-American Gallium".
 S. P. Rosen (Univ. of Texas at Arlington), "Neutrino Oscillations as a Solution to the Solar Neutrino Problem".

8:00 Thursday, Center Salon. (DNP). **M2. NUCLEAR REACTIONS WITH REAL PHOTON BEAMS, P.**

Stoler, presiding.

D. Drechsel (Univ. of Mainz), "Structure of Nucleons and Nuclei Studied with Real Photons".

G. Audit (C.E.N.-Saclay), "Few Body Absorption Mechanisms in Photonuclear Reactions on ${}^3\text{He}$ ".

E. C. Booth (Boston Univ.), "Nuclear Compton Scattering Above the Pion Threshold".

A.M.J. Sandorfi (BNL), "The Sensitivity of Beam Polarization Observables in $d(\gamma, p)n$ to the Short Range Behavior of the Nuclear Force".

11:00 Thursday, Center Salon. (DNP/DPB). **N2. NEW ACCELERATOR CONCEPTS FOR NUCLEAR PHYSICS, M. Berz, presiding.**

J. Nolen (Michigan State Univ.), "The Evolution of Accelerator Capabilities for Low to Medium Energy Heavy Ion Physics".

H. Padamsee (Cornell Univ.), "Application of Superconducting RF Cavities to Electron, Pion and Heavy Ion Accelerators for Nuclear Physics".

H. Mais (DESY), "Acceleration and Storage of Polarized Particles-Experimental Results and Theoretical Problems".

R. E. Pollock (Indiana Univ.), "Storage Rings for Nuclear Physics".