DNP

NEWSLETTER No. 83
JULY 1990

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

ACCOMPANYING THIS NEWSLETTER :

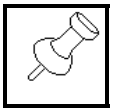
Spring APS Meeting Invited Speaker Nomination Form - Deadline, 2 Nov. 1990.

1990 Directory of Nuclear Physics Laboratories

24-27 Oct., Urbana-Champaign Meeting Information:

- *General Information.*
- *Epitome of Urbana-Champaign Mtg.*
- *List of Invited Speakers.*
- *Epitomes of the Workshops.*
- *A preregistration form, including workshops and banquet.*
- *A housing form.*
- *Local map of meeting area.*

FUTURE DEADLINES



- ***2 November 1990*** - Forms Invited Speakers for the 1991 Spring APS Meeting.
- ***1 September 1990*** - Nominations for 1991 Bonner Prize. (see Item 5.)
- ***7 September 1990*** - Last Day for Preregistration Rates.
- ***19 September 1990 -*** Last Day for Fall Meeting Hotel Reservations to Enjoy Special Rates.

1. DNP FALL MEETING AT THE UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN, IL, 24-27 OCTOBER 1990

The Annual Fall Meeting of the Division of Nuclear Physics will be held 24-27 October at the University of Illinois at Urbana-Champaign. These dates include the Wednesday workshops. The hosts for these events are the Nuclear Physics Laboratory and the Department of Physics. The meetings will be held at Loomis Laboratory of Physics.

The University of Illinois is the academic home for about 35,000 students and about 2,000 faculty. The university houses one of the nation's premiere science and engineering campuses and provides education to about 5,000 undergraduate science and engineering students. The Physics Department consists of about 70 faculty and 300 graduate students, and its research comprises condensed matter physics, nuclear and particle physics, astrophysics, and biophysics.

The University is situated in east-central Illinois amidst some of the world's richest farmland. The towns of Urbana and Champaign have a population of about 100,000 people (exclusive of students) and are expanding and vibrant communities.

MEETING PROGRAM

The meeting consists of six sessions of invited papers, one of which is a plenary session, and 18 sessions of contributed papers. Speakers for two invited sessions were selected by the Program Committee using nominations from the DNP membership. These speakers have been arranged in the sessions on "New Ideas on Old Problems" and "Exploring the Nucleus with Heavy Ions." Two sessions of invited papers were arranged by subcommittees on topics selected by the Program Committee. One session on "Physics and Detectors at RHIC" has been arranged by S. Nagamiya. Another session on "Electromagnetic Structure of Baryons" has been arranged by R. G. Arnold. The Local Committee has arranged a session on "Nuclear Astrophysics."

The 189 contributed abstracts were arranged into 18 sessions by J. M. Dairiki, K. T. Lesko, W. D. Meyers, and H. G. Ritter of LBL, and J. D. Anderson and R. W. Bauer of LLNL. 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. A plenary session "Nuclear Physics in Society" will be held on Thursday afternoon. There will be a "Town Meeting" at 4:00 on Friday afternoon.

WORKSHOPS

Prior to the Divisional meeting, two workshops will be held on 24 October. A workshop on "Opportunities with Low-Energy Antiprotons" has been organized by D. W. Hertzog, R. A. Eisenstein, and A. M. Nathan. A second workshop, "Effects of Correlations in Nuclei" has been organized by V. R. Pandharipande, G. A. Baym, and C. N. Papanicolas.

PLENARY SESSION

The Plenary Session at the Divisional Meeting will address a new set of issues this year. Under the general title of "Nuclear Physics in Society", the session will examine areas in which nuclear physics has had, or is having, an important role to play in society at large. The session will begin on Thursday, 25 October at 1:30 pm in the Foellinger Auditorium on the University of Illinois campus. The three speakers and their topics are Sidney Drell (Stanford University) *"Nuclear Physicists and Nuclear Weapons"*, Paul DeLuca, Jr. (University of Wisconsin) *"Recent Advances in the Use of Particle Accelerators for Radiation Therapy"*, and Hans Bethe (Cornell University) *"The Importance of Nuclear Power."* Each talk will be 40 minutes long with 15 minutes for questions at the end.

DEPARTMENT COLLOQUIUM

At the close of the Plenary Session, the Foellinger Auditorium will be the site of the normal physics department colloquium, which for this date is being given in conjunction with the Divisional Meeting. John Bahcall of the Institute for Advanced Study in Princeton will discuss "Solar Neutrinos." This talk is linked to the invited session scheduled for the next morning on the topic of nuclear astrophysics.

BUSINESS MEETING/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 4:00 p.m., Friday afternoon. Reports on recent happenings of interest to the DNP, a report on recent NSAC activities, and updates from the funding agencies will be presented.

USERS' GROUP MEETINGS

The ATLAS Users' Group Meeting will be held at 6 PM Thursday, 25 October in Room 209 of the Illini Union.

The CEBAF Users' Information Meeting will be at 6 PM Thursday, 25 October; preceding this there will be a CEBAF Users' Social at 5:30 PM. Both events will be held in Room 314A of the Illini Union.

The Indiana University Cyclotron Facility (IUCF) Users' Group Meeting will be held at 6 PM Thursday, 25 October in the General Lounge of the Illini Union.

There will be a meeting at 6 PM Thursday, 25 October in Room 314B of the Illini Union to discuss a Radioactive Ion-Beam Facility Users' Group. A status report will be given by the Steering Committee, and a Users' Group will be formed. (See Item 2 of this newsletter for more details.)

Bates Users' Group Meeting will be held at 5 PM Friday, 26 October in Room 136 of Loomis Laboratory of Physics.

The Michigan State University National Superconducting Cyclotron Laboratory (MSUNSCL) will have a Users' Group Meeting at 5 PM Friday, 26 October in Room 158 of Loomis Laboratory of Physics.

HIGH SCHOOL TEACHER'S DAY

The Division of Nuclear Physics in concert with the Education Office is planning a special day for High School Teachers on Thursday, 25 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

Limited free parking is available in lot B13 at the corner of Springfield Avenue and Gregory Street. These spots are intended for those who arrive via car. Others should use the shuttle bus service.

SHUTTLE BUS SERVICE

Shuttle buses will be available to transport people from the Days Inn University, the Chancellor Hotel, and the University Inn to the conference site. Detailed

information (time schedule and bus stop locations) will be included in the registration packet.

RECEPTION AND BANQUET

A welcoming reception is planned for Wednesday evening 24 October 1990 from 8-11 p.m. at the University Inn. A banquet is planned for Friday 26 October 1990 at the Illini Union. A cash bar reception will precede the Banquet in the South Lounge of the Illini Union.

No formal companion's program is offered during the meeting, but information about cultural and sporting activities and about sights of interest in the surrounding area will be available.

REGISTRATION

The pre-registration fees are $80 for APS members, $120 for non-members, $10 for retired and student members, and $20 for workshop attendance (fee waived for students). A late fee of $10 will be added after 7 September 1990. Pre-registration forms are enclosed.

Registration will begin at 8 AM in the southwest lobby of the Loomis Laboratory of Physics for both workshops on Wednesday, 24 October. Registration will also take place at the Welcoming Reception Wednesday evening, 24 October at the University Inn. Registration will continue on Thursday, 25 October at 8 AM in the Loomis Laboratory of Physics.

TRAVEL AND LODGING

Urbana is located approximately 140 miles south of Chicago and 120 miles west of Indianapolis. It is served by the University of Illinois Willard Airport. There are frequent connecting flights between Champaign-Urbana and St. Louis, Chicago (both O'Hare and Midway), and Dayton, OH airports. We have made arrangements with United Airlines for special discount fares for this meeting. In addition to offering 40% off regular unrestricted coach fares, United will also discount restrictive fares by 5%. To reserve these fares, call United at 1-800-521-4041 and use the profile number 444EZ reserved for attendees of this meeting. The University of Illinois is only 10-15 minutes from Willard Airport and limousine service is both efficient and available at all times. Rental cars are also available. Urbana is approximately 2 1/2 hours by car from Chicago, 2 hours from Indianapolis, and 3 1/2 hours from St. Louis.

A block of rooms has been reserved at three local hotels for conference attendees and their guests at a special rate (plus applicable taxes). To obtain these special prices, telephone the hotel of your choice or mail the enclosed reservation form to the respective hotel by the *19 September 1990 deadline*.

LOCAL COMMITTEE

Members of the Local Organizing Committee are: C. N. Papanicolas (Chairman), G. A. Baym, R. A. Eisenstein, D. W. Hertzog, A. M. Nathan, and V. R. Pandharipande. For further information, please contact the conference coordinator: Ms. Penny Sigler, University of Illinois, Nuclear Physics Laboratory, 23 Stadium Drive, Champaign, IL 61820. Telephone: 217-333-3190; FAX: 217-333-1215; BITNET: SIGLER@UIUCNPL.

2. DISCUSSION OF A POSSIBLE NORTH AMERICAN RADIOACTIVE ION BEAM FACILITY

In the last year a number of nuclear scientists studying nuclei far from stability and those using low energy beams as nuclear probes have been addressing the issue of a possible radioactive ion beam (RIB) facility in North America within the next ten years. At various town meetings and at two workshops, one at Berkeley in the Fall of 1989, and one more recently in April at Los Alamos, it has become evident that there is a wide and strong community interest in exploring the possibility of such a facility. These workshops represented the initial steps to form the scientific justification and to define the key technical developments needed to advance such facilities in North America. They identified a number of exciting, frontier areas that can be addressed, including work in reaction physics, the nuclear structure of nuclei far from stability, nuclear astrophysics, and materials science and atomic physics. A Steering Committee has been formed, consisting of R. F. Casten (BNL), Chair, C. Davids (ANL), J. D'Auria (Simon Frazer), J. Garrett (ORNL), M. Nitschke (LBL), B. Sherrill (MSU), D. Vieira (LANL), M. Wiescher (Notre Dame), and E. Zganjar (LSU). At the Urbana Divisional Meeting, Oct. 25-27, 1990, a status report by the Steering Committee will be given and future plans discussed including the formation of a users group. We also encourage all those interested to contact any member of the Steering Committee to obtain further information and to contribute ideas and suggestions.

3. FUTURE DNP FALL MEETINGS

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

1990	October 24-27	Urbana-Champaign, IL
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.

4. 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***.

5. NOMINATIONS FOR 1991 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 R. 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, and R. H. Davis, E. M. Henley and V. W. Hughes.

Send the name of a proposed candidate with supporting information and a proposed citation before ***1 September 1991*** to: T.J.M. Symons, Chair, Nuclear Science Division, Lawrence Berkeley Laboratory, Bldg. 70A, Rm. 3307, Berkeley, CA 94720.

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

The DOE/NSF Nuclear Science Advisory Committee held a one-day meeting on June 4, 1990. The meeting was held at the CEBAF site in Newport News, Virginia, with the principal purpose of responding to a request from the agencies *"to evaluate and provide advice to the DOE and NSF, by July 2, 1990, on the merit of the CEBAF equipment plan within the scientific priorities of the field as defined in the NSAC Long Range Plan of December 1989."* In the letter presenting this charge to NSAC Chairman Peter Paul, the agencies also noted:

"CEBAF and its user community have prepared a conceptual design report (CDR) for a basic set of research equipment for Experimental Halls A, B, and C. The CDR was prepared in consultation with a technical advisory panel for each hall and has been coordinated with a program advisory committee. The definition of the CEBAF construction project requires that an initial experiment capability, using project funds of about $43 million, must be ready for use by the second quarter of FY 1994, when the accelerator is scheduled to start operation. The present CEBAF cost estimate for implementing the full set of basic equipment described in the CDR substantially exceeds this initial allocation for experimental detectors included in the construction project. A DOE technical review panel has reviewed the technical readiness and cost estimates for the basic set of equipment described in the CDR. In keeping with the above, CEBAF has developed an equipment plan to provide the basic set of research equipment as described in the CDR. This plan includes a proposed schedule of installation, costs, and manpower requirements. DOE must now determine an appropriate response to this plan."

In preparing its response to the charge, the committee heard overviews on the status of the facility and the research plans from Hermann Grunder and Dirk Walecka. Details of the equipment plans were presented by the scientific coordinators of Halls A, B, and C. Additional information was provided by John Schiffer, chairman of PAC4; Ed Temple, head of the DOE technical evaluation review; and Dave Hendrie and Jack Lightbody representing DOE and NSF.

The present CEBAF estimate for the cost of the initial complement of equipment to support experiments now being planned for the three halls is $73 million. This exceeds the amount available from project funds by $30 million. Of this, $5 million is expected from foriegn contributions and $6 million (at $2 million per year) from ongoing DOE capital equipment funds. The remaining $19 million is the shortfall that NSAC was specifically asked to address.

In discussing this issue, it was the concensus of the committee that the completion of the proposed equipment items was very important to accomplish in a timely fashion, so as to support the large number of users involved and to not restrict research opportunities when CEBAF becomes operational. It was also clear that to provide the $19 million from ongoing equipment budgets over the next five years could not be done without unacceptable impacts on other programs. The committee agreed to recommend to the agencies that additional funds, beyond regular program funding, be sought for this

special purpose. A formal reply will be forwarded to the agencies by July 2.

Two other agenda items were discussed briefly:

Peter Parker, chairman of the Heavy-Ion Facility Review Subcommittee (see last Newsletter), reported that the committee membership has been finalized and a schedule for site visits set. The members of the subcommittee are; Konrad Gelbke (MSU), John Huizenga (Rochester), Steve Koonin (Cal. Tech.), John McClelland (LASL), Bob Pollock (Indiana), Gene Sprouse (Stony Brook), and Peter Twin (Liverpool). Site visits are set for August 2-3 at the Holifield Facility (ORNL), August 6-7 at the ATLAS Facility (ANL), and August 8-9 at the 88-inch Cyclotron (LBL). The subcommittee will report their recommendation, on the possible phase-out of one of these facilities, to NSAC at a meeting scheduled tentatively for September 7-8, 1990.

Dick Meyer (DOE) presented a short status report on the stable isotopes issue. Although little change has occurred since the situation described in the last Newsletter, much better lines of communication seem to have been established among all those involved with the transfer of this responsibility from the Energy Research part of DOE to the Nuclear Energy office.

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

A summary of the President's January budget request to the Congress was contained in the February newsletter. To summarize, the overall FY91 request for the National Science Foundation is up by 14% compared to FY90, which includes a 12% increase for Mathematical and Physical Sciences, 5.2% for Physics, and 3.6% for Nuclear Science. In the Department of Energy, the FY91 request for Nuclear Physics is up by 14% and includes $65 million for continuing CEBAF construction and $15 million for beginning construction of RHIC.

Completed House committee action in late June resulted in a 2% decrease in the NSF request. The NSF budget was voted to be $2337 million (a 12.2% increase), including an 8.6% rise for Research and Related Activities. The $47 million for the first installment on the Laser Interferometer Gravitational Wave Observatory was removed at this stage of the budget process, while an extra $34 million was put into Science Education.

House committee action on the DOE Energy and Water appropriations bill was also completed in June, resulting in the full request for nuclear physics. Senate action on these two bills will take place later in the summer.

DNP members who have questions or input on the issues discussed here are encouraged to contact Lee Riedinger (RIEDINGE@UTKVX) by bitnet.

8. UPDATE ON THE SUPPLY OF STABLE ISOTOPES FROM THE NUCLEAR SCIENCES RESOURCE COMMITTEE, L. L. Riedinger, Chairperson

In the DOE program for enriched stable isotopes have been described and a number of concerns about the cost and availability of these isotopes to the research community have been raised. In order to determine the impact of the changes in pricing policies, the Division of Nuclear Physics of the Office of Energy Research at DOE and the Nuclear Science Program at NSF initiated in June surveys of the level of stable isotope usage. The results of these surveys will be used for budget planning and may have a profound effect on the future costs to researchers. It is VERY IMPORTANT that all users of stable isotopes from ORNL during the past three years or those who used the ORNL target-making facilities during this period respond to these surveys. The information desired includes the isotopes used (either bought from the sales pool or borrowed from the Research Materials Collection), the amounts, form, value (for RMC only), cost to you, and the dates that the isotopes were ordered and received. The leaders of these efforts are:

Dr. Richard A. Meyer, Program Manager
ER-23 GTN
Division of Nuclear Physics
U.S. Department of Energy
Washington, D.C. 20545
(301)-353-4398 U7552RM@DOEER.BITNET

Dr. John Fox, Program Director
Nuclear Physics, Physics Division
National Science Foundation
1800 G Street, N.W. Washington, D.C. 20550
(202)-357-7992 JFOX@NOTE.NSF.GOV

All information and inquiries should be directed to them.

9. 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. The retail price of Volume 39 is $49.00 USA and Canada/$53.00 elsewhere. In what follows the price for USA and Canada is before the slash; the price elsewhere follows the slash. For DNP members the price for Volumes 38 and 39 is $35.00/$38.00. Back issues for Vols.. 36-37 are $34.00/$37.00 retail and

$24.00/$26.00 for DNP members. Back issues of Vols.. 12-35 are $30.00/$33.00 retail and $21.00/$24.00 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.

10. 1990 DIRECTORY OF NUCLEAR PHYSICS LABORATORIES

Included with this newsletter was the third edition of the "Directory of Nuclear Physics Laboratories." The reasons for updating the Directory were to include additional laboratories, make corrections in existing listings, and to include computer mailing addresses such as bitnet. This Directory was produced under the sponsorship of the DNP/APS and the National Superconducting Cyclotron Laboratory, Michigan State University and was coordinated by S. Conroy. It was printed by the National Nuclear Data Center, Brookhaven National Laboratory, where the computer code resides. The main costs of the directories and certain out-of-pocket expenses were absorbed by the DNP. Manpower costs were donated by Michigan State University, Brookhaven National Laboratory, and the DNP. S. Conroy and S. M. Austin (MSU) and J. Tuli (BNL) were principal contributors. A special thanks is due to the various people and institutions who contributed to this effort.

11. FUTURE CONFERENCES

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

"Gordon Research Conference on Photonuclear Reactions," to be held August 6-10, 1990 Tilton School, Tilton, New Hampshire. [For further information contact: R. J. Holt, Physics Division-203, Argonne National Laboratory, Argonne, IL 60439-4843, phone: (708) 972-4012, Fax: (708) 972-3903].

"Gordon Research Conference on the Dynamics of Simple systems in Chemistry and Physics", *[Few-Nucleon and Few-Electron Systems]*, August 13-17, 1990, to be held at Proctor Academy, Andover, New Hampshire. [For further information contact: J. L. Friar, MS B-283, Los Alamos National Lab., Los Alamos, NM 87545, phone: (505) 667-6184, bitnet: "friar@lampf"].

"Pittsburgh Workshop on Soft Lepton Pair and Photon Production", 6-8 September 1990, to be held in Pittsburgh PA. [For further information contact: Julia A. Thompson, Dept. of Physics and Astronomy, Univ. of Pittsburgh, Pittsburgh, PA 15260, phone: (412) 624-9060, bitnet: "jth@pittvms"].

"Sixth Interdisciplinary Laser Science Conference," 18-21 September 1990, sponsored by the APS Laser Science Topical Group and joint sessions with the DNP, to be held in Minneapolis, MN. [For further information, contact: Frank Hartmann, Department of Chemistry, Brookhaven National Laboratory, Upton, New York 11973, phone: (516) 282-4336 or 5815 (Fax), bitnet: "hartmann@bnlchm"].

"Topical Conference on Particle Production near Threshold", Oct. 1-3, 1990 to be held at Brown County Inn, Nashville, Indiana. [For further information contact: Edward J. Stephenson, Indiana University Cyclotron Facility, 2401 Milo B. Sampson Lane, Bloomington, IN 47405, phone: (812) 855-9365, Fax: (812) 855-6645, Telex: 272279 Indiana U Blom, bitnet: "stephenson@iucf"].

"Seventh International Symposium on Capture Gamma-Ray Spectroscopy and Related Topics", October 14-19, 1990 to be held at the Asilomar Conference Center, Pacific Grove, California. [For further information contact: R. W. Hoff, Lawrence Livermore National Laboratory, M/S L-234, Livermore, CA 94550, phone: (415) 422-6664, Fax: (415) 422-3160, email: "hoff@lll-winken.llnl.gov."]

"Eleventh International Conference on the Application of Accelerators in Research and Industry", November 5-8, 1990, to be held at the University of North Texas in Denton, Texas. [For further information contact: Jerome L. Duggan, Physics Department, The University of North Texas, P.O. Box 5368, Denton, TX 76203-5368, phone: (817) 565-3252,or 3250 bitnet: "fc66@untvax"Fax: (817) 565-2227].

"Seventh Winter Workshop on Nuclear Dymanics", 27 Jan. - 2 Feb. 1991, to be held in Key West, Florida. [For further information contact: Joseph Kapusta, School of Physics and Astronomy, Univ. of Minnesota, Minneapolis, MN 55455, phone: (612) 624-0506, bitnet: "fvs6269@umnacvx"].

"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 (preceeded 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"].

DNP INVITED SPEAKERS
FALL MEETING

URBANA-CHAMPAIGN, IL
24-27 OCTOBER 1990

The meeting consists of five invited sessions to be held on Thursday, Friday, and Saturday at the University of Illinois, Urbana-Champaign, Il.

9:00 - Thursday Morning - 25 October 1990

AA Physics and Detectors at RHIC, S. Nagamiya, presiding.

B. Ledoux (MIT), *"What Have We Learned from the Heavy-Ion Collisions at the BNL-AGS and CERN-SPS?"*
T. Ludlam (BNL), *"Overview of the RHIC Project"*
H. Satz (CERN), *"Theoretical Insight of RHIC Physics"*
J. Harris (LBL), *"Prospective RHIC Experiments: Physics, Detectors and R & D"*

13:30 - Thursday Afternoon - 25 October

PA Plenary Session, R. A. Eisenstein, presiding.

S. Drell (SLAC), *"Nuclear Physicists and Nuclear Weapons"*
P. Deluca, Jr., (Univ. of Wisconsin) - *"Recent Advances in the Use of Particle Accelerators for Radiation Therapy"*
H. Bethe, (Cornell Univ.) - *"The Importance of Nuclear Power"*

16:30 **- Department Colloquium, G. Baym presiding.**

J. N. Bahcall, (Institute for Advanced Study, Princeton) - *"Solar Neutrinos"*

9:00 - Friday Morning - October 26

BA Nuclear Astrophysics, G. Baym, presiding.

M. Turner (FNAL), *"Nucleosynthesis in the Early Universe"*
J. M. Lattimer (SUNY), *"Neutron Stars and the Equation of State"*
F. K. Lamb (Univ. of Ill.), *"Neutron Stars"*
D. E. Nagle (LANL), *"The CYGNUS Experiment at Los Alamos: An Air Shower Facility for the Study of PeV Cosmic Rays"*

Epitome of the DNP Meeting

Urbana-Champaign, IL

24-27 October 1990

(Chairpersons are in parentheses. Names without initials indicate invited speakers. Meeting Rooms 136, 141, 144, 151, and 158 are in the Loomis Laboratory of Physics.)

20:00-23:00 - Wed.nesday Evening -24 October

Registration and Reception, Concorde Room, University Inn

9:00 -Thursday Morning - 25 October

AA Physics and Detectors at RHIC. Ledoux, Ludlam, Satz, Harris, (G. R. Young) - Room 141.

AB Low-Energy Heavy-Ion Reactions. (DiGregorio) - Room 151.

AC Nuclear Structure I: A < 100. (M.A. Deleplanque-Stephens) - Room 144.

AD Neutron Physics. (S. Grimes) - Room 136.

AE Theory I: Structure. (V. R. Pandharipande) - Room 158.

13:30 - Thursday Afternoon - 25 October

PA Plenary Session: Nuclear Physics in Society. Drell, DeLuca, Bethe, (R.A. Eisenstein) Foellinger Auditorium on the University of Illinois Campus.

16:30 - Thursday Afternoon - 25 October

Department Colloquium. Bahcall (G. Baym).

18:00 - Thursday Evening - 25 October

Atlas Users Group, Illini Union - Room 209.

CEBAF Users Group, Illini Union - Room 314A (17:30 Social).

IUCF Users Group, Illini Union - General Lounge.

Radioactive Ion Beam Facility Users Group Formation Meeting, Illini Union - Room 314B.

9:00 - Friday Morning - 26 October

BA Nuclear Astrophysics. Turner, Lattimer, Lamb, Nagle, (G. Baym) - Room 141.

BB Instrumentation I. (R. Laszewski) - Room 151.

BC Nuclear Structure II: A > 100. (D. Balamuth) - Room 144.

BD Polarization and Few Nucleon. (H. Weller) - Room 136.

BE Theory II: Reactions. (J. Vary) - Room 158.

13:30 Friday Afternoon - 26 October

CA New Ideas on Old Problems, B. Clark, presiding.

G. E. Mitchell (N. Carolina State Univ.), "*Chaos in Nuclei?*"
T. E. Chupp (Harvard), *"Probing Neutron Structure via Polarized Electron-Polarized ^{3}He Scattering"*
H. R. Weller (Duke Univ.), *"Resolution of the (γ,p)/(γ,n) Ratio Problem in ^{4}He"*
A. Magnon (C.E.N. Saclay), *"New Views of the (e,e,'p) Knockout Reaction"*

9:00 - Saturday Morning - 27 October

DA Electromagnetic Structure of Baryons, R. Arnold, presiding.

B. Filippone (Caltech), *"The Origins of Scaling in Inclusive Scattering from Nuclei"*
P. Bosted (American Univ.), *"New Measurements of the Nucleon Electric and Magnetic Form Factors at High Momentum Transfers"*
C. Carlson (College of Wiliam and Mary), "*Perturbative QCD Predictions for Baryon Resonance Electroproduction at High Q^2"*
N. C. Mukhopadhyay (Rensselaer Polytechnic Institute), *"Color Magnetism and Electroweak Excitation of Baryon Resonances"*
A. M. Nathan (Univ. of Illinois at Urbana-Champaign), *"Compton Scattering and the Polarizabilities of the Proton"*

14:00 - Saturday Afternoon - 27 October

EA Exploring the Nucleus with Heavy Ions, C. Gossett, presiding.

S. J. Robinson (Institut Laue-Langevin), "*Gamma-Ray Induced Doppler Broadening"*
D. E. DiGregorio (LBL), "*Angular Momentum and Cross Section in Subbarrier Fusion"*
K. W. McVoy (Univ. of Wisconsin-Madison), *"The Rainbow-Shift Mechanism behind Discrete Optical Potential Ambiguities"*
J. P. Vary (Iowa State Univ.), *"Resonances in the Electron-Positron System"*

13:30 - Friday Afternoon - 26 October

CA New Ideas on Old Problems. Mitchell, Chupp, Weller, Magnon, (B. Clark) - Room 141.

CB Intermediate Energy Heavy-Ion Reactions. (G. Westfall) - Room 151.

CC Instrumentation II. (P. Debevec) - Room 144.

CD Nuclear Reactions. (C. Goodman) - Room 136.

16:00 PB Town Meeting. Paul, Hendrie (J. Ball) - Room 141.

17:00 Bates Users Group - Room 136.

17:00 MSUNSCL Users Group - Room 158.

Friday Evening - 26 October

18:00 Cash Bar, Illini Union - South Lounge.

19:00 Banquet, Illini Union - Rooms A, B, and C.

9:00 - Saturday Morning - 27 October

DA Electromagnetic Structure of Baryons. Filippone, Bosted, Carlson, Mukhopadhyay, Nathan, (R. Arnold) - Room 141.

DB High Energy Heavy-Ion and $p\bar{p}$ Reactions. (T. Ludlam) - Room 151.

DC Weak Interactions, Fundamental Symmetries, and Novel Nuclear Phenomena. (D. Beck) - Room 144.

DD Nuclear Astrophysics and Radioactive Beams. (C. N. Papanicolas) - Room 136.

DE Theory III: High Energy. (J. Lattimer) - Room 158.

14:00 - Saturday Afternoon - 27 October

EA Exploring the Nucleus with Heavy Ions. Robinson, DiGregorio, McVoy, Vary, (C. Gossett) - Room 141.

EB Electron Scattering. (M. Brussel) - Room 151.

EC Giant Resonances. (S. Willamson) - Room 144.

ED Theory IV: General. (D. G. Ravenhall) - Room 136.

TOPICS AND SPEAKERS FOR THE WORKSHOPS TO BE HELD OCTOBER 24, 1990 AT URBANA-CHAMPAIGN IN CONJUNCTION WITH THE APS/DNP FALL MEETING

Workshop Preamble

Two workshops will be held in parallel on 24 October at the Physics Department of the University of Illinois at Urbana-Champaign. Registration will begin at 8:00 AM in the southwest lobby of the Loomis Laboratory of Physics and one registration shall cover both workshops. The workshop on the Effects of Correlations in Nuclei will be held in Room 141 in Loomis Laboratory of Physics. The workshop on Opportunities with Low Energy Antiprotons will be held in Room 151 in Loomis Laboratory of Physics. Both workshops will commence at 9:00 AM.

"EFFECTS OF CORRELATIONS IN NUCLEI"

Organizing Committee:
G. A. Baym, V. R. Pandharipande (Chair), C. N. Papanicolas

The study of the influence of correlations in nuclei has been extensive both theoretically and experimentally. The purpose of this workshop is to bring together experimentalists and theorists concerned about this issue, to review the progress made in understanding this issue, and to explore possible future directions of investigation.

SESSION 1
Chairperson: J. Heisenberg

9:00 WA1 Introduction, V. R. PANDHARIPANDE, University of Illinois at Urbana-Champaign

9:15 WA2 Correlation Effects from the Complex Nucleon-Nucleus Mean Field
C. MAHAUX, *University of Liege*

9:55 WA3 CERES - A Sum Rule Approach to Occupation Numbers
G. J. WAGNER, *Universität Tübingen*

10:35 COFFEE BREAK

11:00 WA4 Strong Nucleon-Nucleon Correlations in the Atomic Nucleus?
The Issue of Absolute Spectroscopic Factors
P. K. A. DEWITT HUBERTS, *NIKHEF-K, Amsterdam, The Netherlands*

11:40 WA5 Nucleon-Nucleon Correlations from Pion Double Charge Exchange
W. R. GIBBS, *Los Alamos National Laboratory*

SESSION 2
Chairperson: C. Ciofi degli Atti

14:00 WA6 Correlation Effects in the Longitudinal and Transverse Response of the Nuclei
J. MORGENSTERN, *CEN Saclay*

14:40 WA7 Scaling and Correlations in Nuclei, D. B. DAY, Univ. of Virginia

15:10 COFFEE BREAK

15:30 Panel Discussion
W. Bertozzi, MIT; M. MacFarlane, Indiana University; E. Moniz, MIT;
V. R. Pandharipande , University of Illinois (convenor); J. Schiffer,
Argonne National Lab; M. Strikman, Leningrad.

"OPPORTUNITIES WITH LOW ENERGY ANTIPROTONS"

Organizing Committee: R. A. Eisenstein, D. W. Hertzog (Chair), A. M. Nathan

The goal of this workshop is to highlight the diverse and multidisciplinary physics problems which make use of the unique characteristics of antiprotons in the sub-eV to multi-GeV range. Atomic, nuclear, and high-energy physicists are involved in many current experiments as well as in the planning for possible new facilities at CERN, FNAL, and KAON.

SESSION 1
Chairperson: G. A. Smith

9:00 WB1 Ultra Cold Antiprotons and Gravity Tests
M. H. HOLZSCHEITER, *Los Alamos National Lab.*

9:40 WB2 A 1000-Fold Improvement in the Measured Antiproton Mass (and Other Possible Measurements with Cryogenic Antiprotons)
G. GABRIELSE, *Harvard University*

10:20 COFFEE BREAK

10:40 WB3 CP Violation in Hyperon Decay, **G. A.** MILLER, *Univ. of Washington*

11:20 WB4 High-Resolution Charmonium Spectroscopy at the Fermilab Antiproton Accumulator
KAMAL K. SETH, *Northwestern University*

SESSION 2
Chairperson: P. Barnes

14:00 WB5 QCD Spectroscopy with Antiprotons: Glueballs, Exotics, and Hybrids
NATHAN ISGUR, *CEBAF*

14:40 WB6 Experimental Searchers for Glueballs, Exotics and Hybrids at LEAR
R. LANDUA, *CERN*

15:30 COFFEE BREAK

15:40 WB7 Antihyperon-Hyperon Production at LEAR
FRANK TABAKIN, *University of Pittsburgh*

16:20 WB8 Nuclear Tests of QCD Using Low Energy Antiprotons
STANLEY J. BRODSKY, *SLAC, Stanford University*

17:00 WB9 New Machine Opportunities at FNAL and KAON
F. E. MILLS, *Fermi National Accelerator Laboratory*