

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

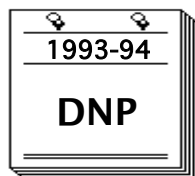
ACCOMPANYING THIS NEWSLETTER :

**12-15 APRIL APS MEETING,
WASHINGTON, DC**

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

**20-23 OCTOBER DNP MEETING,
ASILOMAR, CA**

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



Future Deadlines

- **1 April 1993** - APS Fellowship Nominations (See item 10).
- **3 May 1993**-Nomination forms for invited speakers for the Asilomar Fall Meeting.
- **18 June 1993**- Contributed Abstracts for the Asilomar Fall Meeting (See item 9).

- **1 Sept. 1993**-Nominations for 1994 Dissertation Award (See item 4).
- **1 Sept. 1993**-Nominations for 1994 Bonner Prize (See item 5).
- **17 Sept. 1993**-Last day for Asilomar "Special" Preregistration rates and last day for lodging reservations at the Asilomar conference grounds.

**1. RESULTS OF ELECTION:
OFFICERS AND EXECUTIVE
COMMITTEE FOR 1993.**

By the deadline date of 15 January 1993, 788 properly identified ballots were received for the election of officers and members of the Executive Committee. The results of the election are as follows: Carl B. Dover was elected as Vice-Chair and Virginia R. Brown as Secretary-Treasurer for one year terms. Susan J. Seestrom, Brian D. Serot, and Stephen J. Wallace were elected to two-year terms on the Executive Committee. The counting of the ballots was supervised by Tellers Perry L. Anthony, Maurice B. Aufderheide, David Krofcheck, Mohammed Mustafa, Mark L. Robert, Craig Sangster, Betty Voelker, and Ellen Sturmer

all of LLNL. The members of the 1993 Executive Committee are as follows:

Noemie Benczer-Koller, Rutgers University, Chair (1994)
 Carl B. Dover, BNL, Vice-Chair (1994)
 Wick C. Haxton, Univ. of Washington, Past-Chair (1994)
 Virginia R. Brown, LLNL, Secretary-Treasurer (1994)
 Gerald T. Garvey, LANL, Division Councillor (December, 1993)
 Stephen E. Koonin, Caltech, Division Councillor (December, 1995)
 Lawrence S. Cardman, Univ. of Illinois (1994)
 Walter Henning, ANL (1994)
 Robert D. McKeown, Caltech (1994).
 Susan J. Seestrom, LANL (1995)
 Brian D. Serot, Indiana Univ. (1995)
 Stephen J. Wallace, Univ. of Maryland (1995)

2. COMMITTEES OF THE DNP

The terms of some of the members of the following DNP committees expire in April 1993: Program, Fellowship, Nominating, Nuclear Science Resources, and "Physics News". Suggestions from the DNP membership for new members of these committees for 1993 are welcome and should be sent to Noemie Benczer-Koller. Members of these committees for 1993 will be listed in the May newsletter.

3. 1993 BONNER PRIZE WINNERS

Professor Akito Arima and Professor Francesco Iachello have been awarded the 1993 Tom W. Bonner Prize in Nuclear Physics. The citation reads as follows:

"For the development of the Interacting Boson Model, their recognition of the role of dynamical symmetries in nuclear structure, and for the impact of their work on the entire field of algebraic modeling in nuclear physics."

Professor Arima with the title "Nuclear Collective Motion and the Role of Nucleon Pairs" and Professor Iachello with the title "The Role of Dynamic Symmetries

and Supersymmetries in Nuclear Physics" will present their Bonner Prize lectures at the Spring APS Meeting in Session J1 at 11:00 a.m. on Wednesday in the North Salon (see the accompanying list of DNP Symposia for details). The 1993 Bonner Prize Committee consists of R.J. Perry (Chair), B. Balantekin (Vice-Chair), J. S. Cizewski, F. S. Stephens, and P. Twin.

4. NOMINATIONS FOR 1994 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, P. Twin, H. G. Blosser and R. E. Pollock, A. Arima and F. Iachello.

The purpose of this prize, which currently consists of \$5,000 and a certificate citing the recipient's contributions, is, "To recognize and encourage outstanding experimental research in nuclear physics, including the development of a method, technique, or device that significantly contributes in a general way to nuclear physics research".

Nominations are open to physicists whose work in nuclear physics is primarily experimental, but a particularly outstanding piece of theoretical work will take precedence over experimental work. There are no time limitations on when the work was performed. The prize shall ordinarily be awarded to one person but a prize may be shared among recipients when all the recipients have contributed to the same accomplishment(s).

Nominations remain active for three years. It is extremely helpful for the committee to receive additional letters of support that detail the contributions of the nominee and the impact these contributions have had on the field. It is also appropriate to submit material such as significant articles that might help us evaluate the nominee's contribution. While general statements concerning the value of the nominee's work are important, we must have specific information that allows us to determine what the nominee has contributed and how this contribution has impacted the field.

Send name of proposed candidate and supporting material before **1 September 1993** to: A. B. Balantekin, Dept. of Physics, Univ. of Wisconsin at Madison, 1150 University Ave., Madison, WI 53706.

5. 1994 DISSERTATION AWARD IN NUCLEAR PHYSICS

This biennial prize, which recognizes a recent Ph.D. in nuclear physics, was established in 1985 by members and friends of the Division of Nuclear Physics of the APS. Previous winners are: B. Sherrill and W. J. Burger, Thomas E. Cowan, Michael J. Musolf, and James Edward Koster.

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.

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 1993** 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 Noemie Benczer-Koller, Department of Physics, Rutgers University, New Brunswick, NJ 08903.

6. NEW DNP FELLOWS

The following DNP members are newly elected Fellows of the APS. The award certificates will be presented by the DNP Chair, W. C. Haxton at the DNP Business Meeting. (See item 8.)

*Thomas Joseph Bowles
Alan Leonard Goodman
Christopher Robert Gould
Hans Herbert Gutbrod
Robert V. F. Janssens
Joseph I. Kapsuta
Ronald Martin Laszewski
Nimai Chand Mukhopadhyay
J. Michael Nitschke
Gerald Alvin Peterson
Robert Page Redwine
Glenn Reid Young*

7. FUTURE DNP FALL MEETINGS

The present schedule for fall meetings is as follows:

1993	October 20-23 Asilomar, CA
1994	October 26-29 Williamsburg, VA
1995	October 11-14 Bloomington, IN

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.

**8. SPRING APS MEETING,
WASHINGTON, D.C., 12-15 APRIL
1993.**

The Division of Nuclear Physics has arranged six symposia of invited papers for the Spring meeting. In addition, five joint symposia with the Division of Particles and Fields, the Division of Beams Physics, the Fundamental Constants Topical Group, the Few Body Systems & Multiparticle Dynamics Topical Group, and the Division of Astrophysics have been organized. The times locations and titles of these sessions along with the speakers and the titles of their talks are listed at the end of this newsletter. There are 19 DNP contributed sessions for the Spring meeting. The contributed abstracts were arranged into sessions by: Noemie Benzcer-Koller (Rutgers), Jolie Cizewski (Rutgers), Ronald Ransome (Rutgers), and Larry Zamick (Rutgers).

The Business Meeting of the DNP is scheduled for 17:00, Wednesday, 14 April in the North Salon of the Ramada Renaissance Techworld Hotel following Session K1. The current agenda includes:

- A. Fellowship Awards
- B. 1993 Bonner Prize
Congratulatory
- C. New Officers and Executive
Committee
- D. Invited Sessions for the DNP
Fall Meeting in Asilomar
- E. New Program Committee
- F. DNP Bylaws
- G. DNP Brochure
- H. Budget Updates and Other
Matters; Reports and
Discussions with DOE and
NSF Representatives
- I. Report from NSAC Chair

On Tuesday, 13 April, the meeting will once again feature the Unity of Physics Day, a series of plenary sessions that will give you the opportunity to hear physics speakers outside of one's usual expertise. The Unity of Physics Day will begin with a celebration of the 100th birthday of The Physical Review. At 10:30, Victor Weisskopf will speak on "*The History of Physical Review*". At 11:15, the Forum on History of Physics has organized a session "*Physicists and their Physical Review*", with Abraham Pais, Henry Barschall, Jonathan Logan, David Lazarus, Robert Adair, W. W. Havens, and the Current editor-in-chief, Benjamin Bederson.

Also on Tuesday at 13:45, the Joint APS/AAPT Unity Day session will begin with the address "*Broken Symmetries: Physics and the APS*" by the retiring APS president Ernest Henley, followed by a talk from Eric Adelberger on "*Investigating Gravi - Photons, Gravitational Binding Energy, and Dark Matter in a New Generation of Eotvos Experiments*". The 1993 Lilienfeld Prize winner, David Schramm, will be next, with his talk entitled "*The Big Bang's Interface with Nuclear and Particle Physics*." The last speaker of the day will be the 1993 Oersted Medal winner, Hans Bethe.

**9. DNP FALL MEETING AT
ASILOMAR CONFERENCE
CENTER IN PACIFIC GROVE, CA,
20-23 OCTOBER 1993**

The Annual Fall Meeting of the Division of Nuclear Physics will be held 21-23 October at the Asilomar Conference Center in Pacific Grove, California. The Asilomar Conference Center is a unit of the California State Park System and occupies 105 secluded acres of pines and dunes along the ocean's edge of the Monterey Peninsula. Asilomar is noted for the beauty of its natural setting -- its wind-twisted trees, the rolling, shifting dunes, and the mighty Pacific breakers beating

against the shore. It is also close to other attractions of the Monterey Peninsula, such as the 17-Mile Drive; Pt. Lobos; historical points of interest in Monterey including Fisherman's Wharf and Cannery Row (now the home of the Monterey Aquarium); quaint shops; the Carmel Mission; Big Sur State Park; and the Butterfly Trees in Pacific Grove.

Meeting Program

The meeting will consist of five sessions of invited papers, a plenary session, and approximately 20 sessions of contributed papers. Subcommittees of the 1993 Program Committee will arrange two sessions of invited papers on topics selected at the 12 April Washington Program Committee meeting. Two "voted" sessions will be arranged by the Program Committee Chairman. The local committee will arrange a session on a topic to be announced in future communications. Overhead projectors will be provided in each room; slide projectors will only be available for invited papers (if requested in advance).

Workshops

Prior to the Divisional Meeting, three workshops will be held on Wednesday, 20 October, also at the Asilomar Conference Center. The workshops will run in parallel. A \$25 registration fee covers all three workshops. Registration will begin on 19 October at 15:00 - 21:00 hrs and continue at 8:00 hrs on 20 October. Registration for the DNP meeting can also be accomplished at that time.

A workshop on "*Physics Opportunities with Large Ge Detector Arrays; Present and Future*" is being organized by J. Becker (LLNL), M. Stephens (LBL) and J. Cizewski (Rutgers). During the last several years, there has been an outpouring of physics from the current generation of large Ge detector arrays. To follow up the

physics opportunities uncovered by these now mature devices, a new generation of very large arrays (EUROGAM, GAMMASPHERE, and GASP) have been designed and are under construction. The first phases of these new arrays are operating and producing exciting physics results. This workshop will provide an introduction to the physics opportunities, the current physics problems under study, and a look to the future.

A workshop on "*Multifragmentation*" is being organized by D. Cebra (UC Davis), G. Fai (KSU), C. K. Gelbke (MSU), J. Natowitz (TAMU), and H. G. Ritter (LBL). During the course of violent nucleus-nucleus collisions, regions of hot, dense nuclear matter are formed. A large body of data from new 4π detectors is now available that is challenging existing reaction models. These detailed experimental studies have examined the final states of the disassembly process which have been compared to microscopic models that track the evolution of the reaction through its collision stage. By varying the model parameters, one can obtain insights about the equation of state of nuclear matter and the transition between the cold liquid-drop phase and a Fermi gas of unbound nucleons. Recent theoretical simulations have indicated the exciting possibility of forming exotic nuclear shapes (disks, donuts, bubbles) as transient structures in heavy-ion collisions. This workshop will present the latest experimental and theoretical studies as well as the physics opportunities opened up by this new generation of 4π detectors.

A workshop on "*Frontiers in Neutrino Physics*" is being organized by K. Lesko (LBL), S. J. Freedman (UCB), B. Fujikawa (LBL), and A. Garcia (LBL). The recently reported SAGE and GALLEX neutrino fluxes, Kamioka's real-time observations of solar neutrinos, and the first observations of neutrinos from a supernova have greatly increased the nuclear physics community's interest in

neutrino physics. The next generation of neutrino detectors is now under construction and will begin observations in the next few years. This workshop will address the Solar Neutrino Problem and possible solutions, emphasizing these new data and the capabilities of the new detectors. We will also address the closely related topics of accelerator and reactor studies of neutrino oscillations, atmospheric neutrino anomalies, and possible supernova neutrino signatures, again emphasizing the next generation of experiments.

Registration and Accommodations

On-site registration for the meeting will take place from 8:00 - 21:00 hrs on Wednesday 20 October and from 8:00 - noon on 21 October. The pre-registration fees are \$90 for DNP members, \$170 for non-DNP members, and \$10 for retired and unemployed members and students. The cost of the workshop is an additional fee of \$25. The cost of registration will increase after the preregistration date of **17 September 1993**.

Space, limited to about 600 participants, has been reserved at Asilomar and is in both "historic" and "deluxe" accommodations. Single accommodations (one person per room) at Asilomar are extremely limited. Special requests may be made by contacting Mollie Field in the Conference Coordination Group at LBL. Every effort will be made to accommodate these requests. For those individuals unable to acquire single accommodations at Asilomar, off-site housing is available at nearby hotels. Please contact Mollie Field (510) 486-6386 for a current listing of these hotels.

A facility day-user's fee of \$35 per day will be charged to those participants staying off site. This fee allows access to all meeting and recreational facilities and entrance to the banquet. Those choosing to stay off-site must purchase an Asilomar

meal ticket to be able to eat in the Center's dining hall (except the banquet). These tickets may be purchased from the Asilomar staff upon arrival at the symposium.

The package rates, (refer to enclosed registration form), include lodging fees and meals (from dinner on Wednesday, 20 October through lunch on Sunday, 24 October, including a banquet). The additional amount for the workshop (the night of 19 October) is also indicated. Accommodation fees at Asilomar are sold as a package. No refunds can be made for early arrival or departure.

Requests for accommodations must be received by **17 September 1993**. Please use the accompanying reservation form, returning it and your check (we are unable to accept charge cards) to APS/DNP 1993 Conference Coordinator, Mail Stop 50F, Lawrence Berkeley Laboratory, Berkeley, California 94720 USA. For additional information concerning accommodations contact Mollie Field at the above address, phone (510) 486-6387 or "*mollie@lbl.gov*".

Special Events

A welcoming reception is planned for Wednesday evening, 20 October. A banquet at Asilomar Conference Center is planned for Thursday evening, 21 October. An evening visit to the Monterey Aquarium is planned for Friday, 22 October. No formal Companion's Program is planned during the meeting but information about sights in the Monterey area will be available.

Deadlines and Rules for Submitting Abstracts

In order to provide sufficient time for printing abstracts in the Bulletin the deadline for contributed abstracts is **18 June 1993**. Abstracts should conform to the format specified in the enclosed instructions, and should be sent, in triplicate, to the Secretary-

Treasurer of the Division of Nuclear Physics:
Dr. V. R. Brown, Lawrence Livermore
National Laboratory, Box 808, L-288,
Bldg.181, Livermore, CA 94550. For express
mail services such as Federal Express 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.

Unfortunately, we are unable to accept
abstracts sent by fax or via electronic mail
such as bitnet; abstracts sent C.O.D. cannot be
accepted. If more than one contributed paper
is submitted with the same first author,
please indicate which abstract should be
assigned to the regular program; all except
one will be assigned to the supplementary
program. All instructions and requests
regarding an abstract should appear at the
bottom of the abstract itself.

There have been complaints that an
increasing number of contributed abstracts
are not being presented and that no
notification is being given. If you or a
colleague are unable to present your paper,
please inform the Secretary-Treasurer in
advance.

Local Committee

Further details on the meeting and
the final program will be given in
subsequent newsletters and in the May and
September issues of the APS News.
Members of the local organizing committee
are G. J. Wozniak (Chair), LBL, J. A. Becker,
LLNL, V. R. Brown, LLNL, D. Cebra, UC.
Davis, K. T. Lesko, LBL, and M. Nitschke,
LBL.

User Group Meetings at Asilomar

It is anticipated that many groups
will wish to hold User Group meetings
during the Fall meeting at Asilomar. In
order to schedule them so as to prevent
conflicts with other activities and to have

them announced in the September Bulletin,
it will be necessary to notify Mollie Field of
the Conference Coordination Group or G.
Wozniak, of the Local Committee, by **June
25, 1993**.

10. 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 Mrs. Maximilla Cassell (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 1993 DNP Fellowship Committee
is comprised of G. M. Crawley (Chair), E. J.
Moniz, and V. E. Viola. 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 have a record of excellence in research that has been sustained over several years, and have done at least one major, original work that has influenced his/her specialty in a significant way.

The list of APS Fellows (by APS subunit) elected in a given year is published in the March issue of APS News. 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.

11. BUDGET UPDATE FROM THE NUCLEAR SCIENCE RESOURCES COMMITTEE, G. CRAWLEY and L.L. RIEDINGER

The FY93 appropriations bills affecting nuclear physics in both the Department of Energy and the National Science Foundation were passed and signed into law on October of 1992. Since then, there has been much activity in the National Science Foundation on how to distribute the funds to programs, in light of the fact that the research part of the appropriated budget decreased by 0.7%. While the final word on the NSF internal budget distribution is not known, the news for the Physics Division looks grim. Last year's budget (FY92) for the Physics Division was \$138M and the current allocation for FY93 is down about \$10M to \$128M. The \$10M decrease in the Physics budget will provide a \$4M increment in capital expenditures on LIGO (the Laser Interferometer Gravitational Observatory) and \$6M for FCCSET initiatives (e.g. Advanced Materials, High Performance Computing, etc.) in other parts of the NSF. Officially, LIGO is not funded from the Physics Division, residing instead in the "Facilities" budget line in the Mathematics and Physical Science (MPS) Directorate. In FY92, \$16M was provided for LIGO

construction; in FY93 the intended sum for construction is \$20M, although the final amount is not decided at this writing. The \$4M increment for FY93 is being taken from Physics.

In addition, there are also mandatory redirects of about \$5.5M of Physics Division monies into the FCCSET areas. However, the Division has a number of programs which properly belong under the FCCSET umbrella, and can be identified as such, greatly lessening this impact. Nonetheless, after accounting for various mandatory reserve funds that will be withheld by the Division Director Robert Eisenstein, the Assistant Director for MPS William Harris, and by Director Walter Massey, the FY93 budget for base programs could be as low as \$117M, an effective decrease of around 15%.

This is a far worse situation at the NSF than was envisaged only a year ago by the Schiffer panel and makes the reviews currently underway of the NSF Nuclear Programs, both by NSAC and internally, all the more critical. In fact, bad as the situation seems now, it could get even worse. As indicated above, the present NSF budget plan assumes that LIGO capital spending will increase from \$16M (FY92) to \$20M in FY93. However, the current budget language from Congress actually mandates that LIGO spend \$38M in FY93. If the extra \$18M increase really is required, and is taken entirely from the Physics Division, then the impact on Physics Division programs would be disastrous. Negotiations with Congress are underway attempting to avoid this. The situation for FY94 is completely unknown. You might find this information useful in discussions of the situation with your Congresspersons and/or Senators.

Concerning the Department of Energy, the broad budgetary picture is the same as when the legislation was passed in October, as discussed in the last DNP newsletter. Most of the guessing occurs

about the anticipated FY94 request. The budget proposal of the Bush administration has been on hold until the Clinton administration can make its input. President Clinton's State-of-the-Union address on February 17 should give some broad budgetary priorities, but the details will not be available perhaps until late March. Key questions to be answered then include how the SSC might impact the other programs in DOE General Science (nuclear and high energy physics), whether LAMPF and accompanying funds will be moved back into the Office of Energy Research (OER) from Defense Programs, and of course the general level of support for nuclear physics.

One positive action of the new administration seems to be the appointment of Dr. John Gibbons as the new Director of the Office of Science and Technology Policy and as the President's Science Advisor. The speed of this appointment and the assignment of Gibbons to the National Economic Council (a first for a Science Advisor) bode well for the emphasis of the new administration on science and technology. Gibbons is a physicist who worked at Oak Ridge National Laboratory and then the University of Tennessee before going to Washington to head the Congress' Office of Technology Assessment for the last thirteen years. Everyone anticipates a close working relationship between Gibbons and Vice President Gore. The makeup of the OSTP team is unclear at this time, although it is expected that two OTA people will move there.

Concerning crucial agency positions, it is reported in the APS What's New that NSF director Walter Massey will leave for a post at the University of California, and that DOE OER director Will Happer will be staying.

12. NSAC SUBCOMMITTEE ON NSF-SPONSORED NATIONAL USER FACILITIES FOR NUCLEAR

PHYSICS, E. MONIZ (NSAC CHAIR)

The Physics Division of the National Science Foundation is faced both with a substantial funding reduction from FY92 levels and with Congressionally directed initiatives to be supported out of the reduced budget. This was discussed at the October NSAC meeting in Santa Fe. Although the Division's budget is not yet completely settled, reductions in nuclear physics funding of approximately 10%, quite possibly more, are likely. Such a prospect is substantially worse than the worst-case scenario (flat as-spent dollars) which the NSAC Subcommittee on Implementation of the Long Range Plan (the Schiffer subcommittee) considered just one year ago. In line with the recommendations of that Subcommittee, and in view of the current and perhaps continuing budget squeeze, the Physics Division is forced to re-examine the structure of its commitment in nuclear physics. The eight university laboratories supported by NSF are being reviewed by a special emphasis panel chaired by Walter Henning (ANL). The large national user facilities at Indiana and Michigan State, IUCF and NSCL respectively, receive 44% of the NSF Nuclear Physics budget and serve very large user communities, including DOE sponsored users and foreign scientists. Consequently, reductions at these laboratories would automatically impact the broad community and should be considered by NSAC. This resulted in the following charge, issued on November 16, 1992:

"Under scenarios of 5% and 10% reductions in the total actual year funding going towards operations and research at IUCF and MSU/NSCL in FY93, with little likelihood for real growth in the near term, how should the cutbacks at one or both of these labs be structured so that the highest priority scientific objectives are

realized and that the future scientific opportunities are maximized? Consideration should be given to the short and long term impact of such cutbacks on the availability of facilities for (i) research on hadronic and heavy ion nuclear physics, nationwide and worldwide, (ii) research in related applied and cross-disciplinary activities, and (iii) the training of young scientists."

To help structure its response to the charge, NSAC has established a Subcommittee chaired by Bob Redwine (MIT). Other members include D. Hagerman (LANL), R. McGrath (Stony Brook), B. Mueller (Duke), R. Tribble (Texas A&M), S. Wallace (Maryland), and G. Young (ORNL). The principal criterion is preservation and advancement of the highest priority science and of future scientific opportunity, viewed in a national and indeed international context. Education of outstanding young scientists will be an important consideration, as will be accelerator physics and applied research programs. The research activities of both in-house and external user groups will be evaluated. Finally, the Subcommittee will recommend on the distribution of funding reductions at the two user laboratories. Of course, the final budget for IUCF and NSCL will be set by the Foundation after optimization of the funding of different nuclear physics program elements (user labs, university labs, single investigators and small groups) and of funding in different physics subfields. Preliminary reports indicate the enormous difficulty facing the Subcommittee, NSAC and the Foundation, since both laboratories have very strong scientific programs, novel capabilities, commendable user support, and significant cost-sharing.

The Subcommittee will present its findings to NSAC at a February 26 meeting to be held at NSF. Those members of the community wishing to make public

comment at the meeting are asked to contact John Lightbody, Program Director for Nuclear Physics at the NSF.

13. INSTITUTE FOR NUCLEAR THEORY, WICK C. HAXTON

The Institute for Nuclear Theory programs for 1993 are either closed or nearly closed to new applicants. If you are interested in attending any of the following, please contact the program organizers as soon as possible.

Nuclear Physics in Atoms and Molecules: Feb. 15-May 28

Organizers:

Eugen Merzbacher "ulyссе@unc"
Jim Friar "friar@lampf"
Berndt Müller
"muller@phy.duke.edu"

Phenomenology and Lattice QCD: June 21-Sept. 3

Organizers:

Stephen Sharpe "sharpe@galileo.phys.washington.edu"
Gregory Kilcup "kilcup@pacific.mps.ohio-state.edu"
John Negele "negele@mitlns.mit.edu"
"

[There will be a summer school, co-sponsored by the University of Washington, in conjunction with this program, June 21-July 2. Students and young researchers interested in attending should apply to the organizers by March 1.]

Large Amplitude Collective Motion: Oct. 4- Dec. 17

Organizers:

Aurel Bulgac "bulgac@msunsl"
George Bertsch "bertsch@phast.phys.washington.edu"

The INT's National Advisory Committee met in August to help select programs for 1994, which are listed below.

Early applications to the 1994 Organizers are encouraged.

Solar Neutrinos and Neutrino Astrophysics: Feb. 22-May 31

Organizers:

Baha Balantekin
"baha@wisnud.physics.wisc.edu"
Eugene Beier
"geneb@upenn5.hep.upenn.edu"

[The program will include workshops on the solar model (co-organized with John Bahcall) and on dark matter detection (co-organized with the Berkeley Center for Particle Astrophysics)].

Applications of Chaos in Many-Body Quantum Physics: June 13-Sept. 2

Organizers:

Steve Tomsovic
"tomsovic@max.u.washington.edu"
Eric Heller
"heller@gibbs.chem.washington.edu"
Hans Weidenmüller
"haw@dhdmpi5.bitnet"

Hot and Dense Nuclear Matter: Sept. 12-Dec. 10

Organizers:

Jorgen Randrup
George Bertsch
"randrup@lbl.bitnet"
"bertsch@phast.phys.washington.edu"
Ulrich Mosel
"mosel@piggy.physik.uni-giessen.de"

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.

1993 Prices: In what follows the price for U.S.A. is before the slash; the price for "Other Countries, including Canada" follows the slash. Volumes 12-41 are \$55/\$60 retail and \$39/\$42 for DNP members. Volume 42 (available Dec. 1992) will be \$59/\$64 retail and \$42/\$45 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. *Since 1 January 1991, all orders shipped to Canada require the addition of a 7% General Sales Tax.*

15. FUTURE CONFERENCES

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

"Future Directions in Particle and Nuclear Physics at Multi-GeV Hadron Beam Facilities" to be held 4-6 March 1993 at Brookhaven National Laboratory. This is a follow-up to the one-day workshop held in Santa Fe on 13 Oct. 1992. [For further information contact Elaine Zukowski, Conference Secretariat, Bldg. 510 F, Brookhaven National Laboratory, Upton, NY 11973, phone: (516) 282-3866, fax: (516) 282-5820, bitnet: "henp@bnldag", "hepnet:bnldag::henp", internet: "henp@bnldag.bnl.gov"].

"Second International Workshop on Time Reversal Invariance and Parity Violation in Neutron Scattering and Reactions" to be held 4-7 May 1993 at Dubna, Russia, and jointly sponsored by TUNL, LANL and JINR. [For further information contact Yu. B Popov at Dubna (ypopov@lnp13.jinr.dubna.su), or C.R.Gould at TUNL, bitnet: gould@tunl or J.D.Bowman at LANL bitnet: bowman@lampf].

"The International Workshop on Polarized Ion Sources and Polarized Gas Targets" to be held 23-27 May 1993, at the University of Wisconsin, Madison, Wisconsin. [For further information contact: Prof. L.W. Anderson or Prof. W. Haerberli, Department of Physics, University of Wisconsin, 1150 University Avenue, Madison, Wisconsin 53706, phone: (608) 262-6555/8962, fax: (608) 262-3598, email: bitnet%*madspin@wiscnuc*].

"Third International Conference on Radioactive Nuclear Beams" to be held 24-27 May 1993, at Michigan State University. [For further information contact: David J. Morrissey, National Superconducting Cyclotron Lab, Michigan State University, East Lansing, Michigan 48824, phone: (517) 355-9554, fax: (517) 353-5967, internet: "*morrissey@cycvax.nsl.msu.edu*" or bitnet: "*morrissey@msunscl*".]

"8th Annual Hampton University Graduate Studies-HUGS AT CEBAF" to be held May 26-June 12, 1993, at the Continuous Electron Beam Accelerator Facility, Hampton University, Hampton, Virginia. [For further information contact: Dr. Michael Frank, Chair, Local Organizing Committee, Dept. of Physics, Hampton Univ., Hampton, Virginia 23668, phone: (804) 249-7369 or 727-5938, bitnet: "*frank@CEBAF.gov*".]

"Gordon Research Conference on Nuclear Chemistry" to be held July 5-9 1993, at Colby-Sawyer College, New Londen, New Hampshire. [For further information contact R.V.F. Janssens, Physics, Div., Argonne National Laboratory, Argonne, IL 60439, phone: (708) 252-3663), fax: (708) 252-6210, bitnet: "*janssens@anlphy*".]

"6th Annual Summer School in Nuclear Physics Research" to be held 11-24 July 1993, at Raleigh, North Carolina, USA, B. Müller and R. Roberson, Organizers. [For further information contact Philip J. Siemens, OSU Physics Department, 301

Weniger Hall, Corvallis, OR 97331-6507, phone (503) 737-1697, fax - 1683, e-mail: "*siemens@physics.orst.edu*".]

"Gordon Research Conference on QCD in Nuclear Physics" to be held July 26-30, 1993, at the Tilton School, Tilton, New Hampshire. [For further information contact R. D. McKeown, 106-38 Kellogg, Caltech, Pasadena, CA 91125, phone: (818) 356-4316, fax: (818) 564-8708, bitnet: "*bmck@caltech*".]

"The Gordon Conference on Dynamics of Simple Systems in Chemistry and Physics" to be held August 16-20, 1993 at Proctor Academy in Andover, New Hampshire. This interdisciplinary meeting is of interest to few-nucleon and few-electron physicists, quantum chemists, and others interested in systems with relatively few dynamical degrees of freedom. [For further information contact: J. L. Friar, Los Alamos National Lab., Chairman. e-mail: "*friar@lampf.bitnet*", R. S. Berry, Univ. of Chicago, V-Chairman, e-mail: "*berry@rainbow.uchicago.edu*" or the Gordon Research Conferences Secretariat].

"Gull Lake Nuclear Physics Conference on Giant Resonances" to be held 17-21 August 1993, in Gull Lake, Michigan. [For further information contact: Michael Thoennessen, National Superconducting Cyclotron Lab., Michigan State Univ., East Lansing, MI 48824, phone: (517) 355-7549, fax: (517) 353-5967, internet: "*thoennessen@cycvax.nsl.msu.edu*" or bitnet: "*thoennessen@msunscl*".]

"8th International Symposium, on Capture Gamma-Ray Spectroscopy and Related Topics," to be held 20-24 September 1993, in Fribourg, Switzerland. [For further information contact: J. Kern, Physics Department University, CH-1700 Fribourg, Switzerland, phone: (41) (37) 826233, fax: (41) (37) 826519, bitnet: "*kern@cfruni52*".]

"The Fifth Conference on the Intersections of Particle and Nuclear Physics" to be held May 31 to June 6, 1994 at the Stouffer Vinoy Resort, St. Petersburg, FL. The Conference will focus on the common areas of interest of current Particle and Nuclear Physics including Theory and Experiment, Facilities and Technology, and will emphasize the Physics in the Energy Region of 1 to 200 GeV. [For further information contact Elly Driessen, Conf. Secretary, TRIUMF, 4004 Westbrook Mall, Vancouver, B.C., V6T 2A3, Canada, phone: (604) 222-1047, fax: (604) 222-1074, telex: (0)-4508503, bitnet: "driessen@triumfcl", internet: "drissen@reg.triumf.ca", decnet: "45397::driessen"].

APS MEETING -- WASHINGTON, DC

12-15 April 1993

SYMPOSIA OF THE DNP
Ramada Renaissance Techworld Hotel

- 8:00 Monday, North Salon. (DNP). **A1. APPLICATIONS OF NUCLEAR PHYSICS**, G. M. Crawley, presiding.
- J. Davis (LLNL), "Accelerator Mass Spectrometry: Applications in Biomedicine, Geochemistry and Industry".
 - L. Grodzins (MIT), "Nuclear Techniques for Detecting Contraband".
 - R. Weinstein (IBPD, Univ. of Houston), "High Field Permanent Magnets Made of High Temperature Superconductor".
 - J. Slater (Loma Linda Univ. Medical Center), "Exploiting the Superior Absorption Characteristics of Protons for Treating Human Disease".
- 11:00 Monday, North Salon (Few-Body Systems and Multiparticle Dynamics Topical Group/DNP). **B1. LIGHT NUCLEI: STRUCTURE AND DYNAMICS**, R. B. Wiringa, presiding.
- W. Glockle (Univ. of Bochum), "Three Nucleon Scattering".
 - B. Berman (George Washington Univ.), "Pion Scattering from Very Light Nuclei".
 - V. R. Pandharipande (Univ. of Illinois), "Quantum Monte Carlo Methods for Light Nuclei".
 - I. Sick (University of Basel), "Electromagnetic Form Factors of Light Nuclei".
 - J. Tjon (Univ. of Utrecht), "Inelastic Electron Scattering in Few Nucleon Systems".
- 14:30 Monday, North Salon (DPB/DNP). **C1. NEW NUCLEAR PHYSICS ACCELERATOR INITIATIVES**, J. Garrett, presiding.
- L. S. Cardman (Univ. of Illinois/CEBAF), "The CEBAF Accelerator and Its Physics Program".

- J. Hangst (Aarhus Univ.), "Laser Cooling of Stored Ion Beams".
- J. A. Nolen, Jr. (ANL), "Relative Merits of Projectile Fragmentation and ISOL Methods for Producing Radioactive Beams".
- D. K. Olsen (ORNL), "The Oak Ridge Radioactive Ion Beam Facility".
- R. F. Casten (BNL), "Nuclear Physics Opportunities with Radioactive Beams".

8:00 Tuesday, North Salon (DPF/DNP).

E1. TOPICS IN NUCLEAR AND PARTICLE PHYSICS, D. Geesaman, presiding.

- B. Zeitnitz (Karlsruhe), "The KARMEN Neutrino Results".
- G. A. Miller (Univ. of Wash.), "Color Transparency".
- C. Taylor (Case Western Reserve Univ.), "Disoriented Chiral Condensates".
- V. Hughes (Yale Univ.), "Spin-Dependent Structure Function of the Deuteron from Polarized Muon-Deep Inelastic Scattering".

8:00 Wednesday, North Salon (DNP). **I1. NUCLEONS AND NUCLEI: PROBES OF WEAK TO STRONG INTERACTIONS**, R. Eisenstein, presiding.

- D. Wright (TRIUMF), "Measurement of the Induced Pseudoscalar Coupling Constant from the Rate of Radiative Muon Capture in Hydrogen".
- R. G. E. Timmermans (LANL), "Physics of the Antiproton-Proton System".
- N. Isgur (CEBAF), "Heavy Quark Symmetry of the Strong Interaction".
- H. Sorge (LANL), "Production and Signature of Extremely Dense Baryon Matter Produced with the Au Beam at the AGS".

11:00 Wednesday, North Salon (DNP). **J1. 1993 BONNER PRIZE LECTURE: STRUCTURE CALCULATIONS IN NUCLEAR AND CONDENSED MATTER PHYSICS**, W. Haxton, presiding.

- A. Arima (Tokyo Univ.), **1993 TOM W. BONNER PRIZE LECTURE**: "Nuclear Collective Motion and the Role of Nucleon Pairs".
- F. Iachello (Yale Univ.), **1993 TOM W. BONNER PRIZE LECTURE**: "The Role of Dynamic Symmetries and Supersymmetries in Nuclear Physics".
- E. Ormand (Calif. Institute of Tech.), "Monte Carlo Methods for the Shell Model".
- J. Ginocchio (LANL), "The Fractional Quantum Hall Effect and the Spherical Shell Model".

14:30 Wednesday, North Salon (DNP). **K1. NUCLEAR MEASUREMENTS OF ASTROPHYSICAL IMPACT**, A. Champagne, presiding.

- M. Gai (Yale Univ.), "Helium Burning and the Death of Massive Stars from the Beta-Delayed Alpha-Particle Emission of ^{16}N ".
- L. Buchmann (TRIUMF), "The Beta-Delayed Alpha-Decay of ^{16}N and the $^{12}\text{C}(\alpha,\gamma)^{16}\text{O}$ Cross Section at Low Energies".
- T. Delbar (Universite Catholique de Louvain), "Nuclear Astrophysics Studies with Radioactive Beams at Louvain-la-Neuve".
- M.B. Aufderheide (LLNL), "Weak Interactions in Nuclei in Pre-Supernova Evolution".

17:00 Wednesday, North Salon - **DNP BUSINESS MEETING**

19:30 Wednesday, North Salon (DNP). **L1. DENSE MATTER AND THE EQUATION OF STATE**, J. Stachel, presiding.

- K. Gelbke (MSU), "Multifragment Disintegrations of Expanding Nuclear Systems".
- R. Madey (Kent State Univ.), "Can Neutrons from Nucleus-Nucleus Collisions Probe the Nuclear Matter Equation-of-State?"

- N. Herrmann (KPI), "Collective Flow in Central Heavy Ion Collisions at Relativistic Energies".
P. Braun-Munzinger (SUNY Stony Brook), "Physics with Au+Au at Ultrarelativistic Energies".

8:00 Thursday, North Salon (DNP). **M1. OPEN QUESTIONS IN NUCLEAR STRUCTURE PHYSICS**, J. A. Cizewski, presiding.

- J. P. Draayer (Louisiana State Univ.), "Microscopic Models of Collective Phenomena in Deformed Nuclei".
A. Aprahamian (Univ. of Notre Dame), "Multi-Phonon Vibrations in Deformed Nuclei".
J. Billowes (Univ. of Manchester), "Influence of Shape on Alignment Characteristics in the A=80 Region".
R. G. Henry (ANL), "Onset of Collectivity in Tellurium Nuclei".

11:00 Thursday, North Salon (Fundamental Constants Topical Group/(DNP)). **N1. PRECISION TECHNIQUES IN**

NEUTRINO PHYSICS, W. Haxton, presiding.

- J. J. Bonn (Universitat Mainz), "Improved Limit on the Electron Neutrino Rest Mass from Tritium Beta Decay".
R. Van Dyck (Univ. of Wash.), "High Precision Penning Trap Measurements of Light Ion Masses".
R. E. Lanou (Brown Univ.), "Particle Detection by Evaporation from Superfluid Helium".
R. Frosch (Paul Scherrer Inst.), "A New Measurement of the Muon Neutrino Mass".

14:30 Thursday, South Salon (DAP/(DNP)). **O3. INFORMATION FROM THE INTERIORS OF STARS**, G. J. Mathews, presiding.

- T. Brown (NCAR), "Seismology of the Sun: Results and Prospects".
D. E. Winget (Univ. of Texas Austin), "Inside the White Dwarf Stars".
J. R. Wilson (LLNL), "The Supernova Explosion Process".
G. M. Fuller (UC-San Diego), "Probing Properties of Massive Neutrinos with Supernova Nucleosynthesis".