

BPX Review Successful

Project moves to next design phase

With the success of the Conceptual Design Review, The Burning Plasma Experiment (BPX) has made it over an important hurdle. "The review panel was very complimentary about the level and quality of the design," said John Schmidt, manager of the BPX project. "We've been working on the conceptual design—looking at various options since 1984, so we're very pleased to now have approval to proceed with detailed design."

For four days, the review panel, experts in plasma physics from the U.S., Japan, the Soviet Union, Great Britain, Italy, Germany, and Canada, deliberated over the design. Chaired by Lee Barry of the Oak Ridge National Laboratory,

the members, observers, and assistants involved met here from March 25-28.

About half the BPX team are PPPL personnel, with the architectural engineering firm, EBASCO, also located here. Other team members are from the Massachusetts Institute of Technology, Oak Ridge, Los Alamos, Idaho National Engineering Laboratory, and various universities and industries.

To prepare for the review, BPX staff expended intensive effort to complete the design, cost estimate, and schedule development. The fact that 6,000 pages of documentation were made available speaks to just how big a job the preparation was. However, the effort was well

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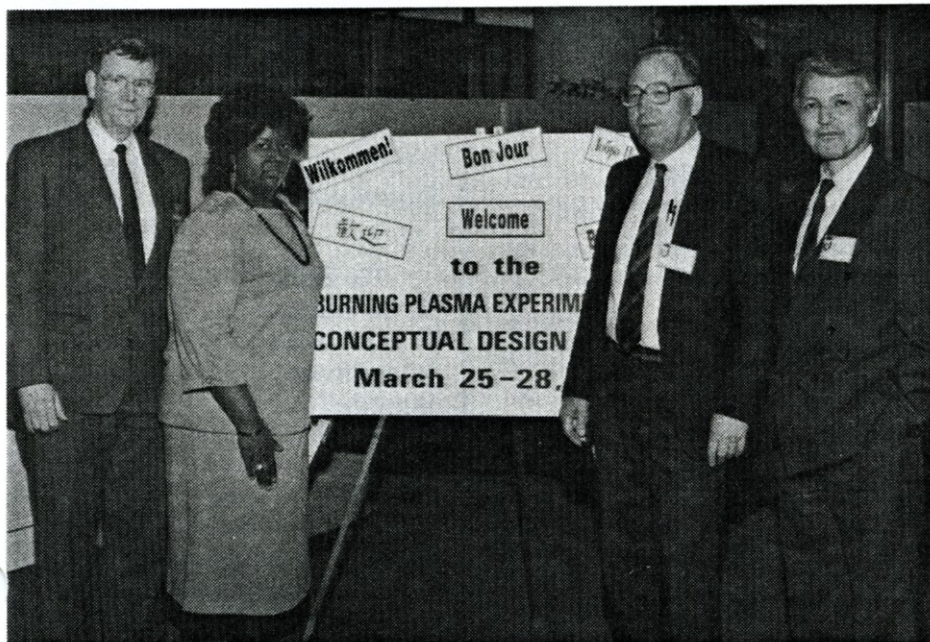
Secretary of Energy to Speak to Staff

Science education highlighted

Secretary of Energy James D. Watkins will speak to the entire staff at PPPL on Thursday, May 2, following a meeting with University President Harold Shapiro and a tour of TFTR. The tentative time of his talk is set at 4:45 p.m. in the M.B. Gottlieb auditorium. His visit here was prompted by the positive report on PPPL that he received from Tiger Team Leader Susan Brechbill.

Earlier in the day, Secretary Watkins will address students at the Trenton Franklin Elementary School, one of the schools participating in the PPPL Science Education Partnership and the District's science magnet school. He will also present certificates to all science fair winners in the school system and meet some of the Trenton teachers who participated in last summer's science education activities at the Lab.

The PPPL Science Education Program was highlighted as a "Noteworthy Practice" in the Tiger Team Report and is of special interest to Secretary Watkins. Through the Partnership with Franklin, speakers from the Lab have visited the school, and equipment has been donated. In addition, students have come to PPPL for presentations and a tour. ■



From left to right: Dr. Hans Conrads, TEXTOR; Gail Lynne Marshall, Receptionist for BPX Project; Dr. Roberto Andrear, Frascati; and Dr. Engler A. Azizov of I.V. Kurchatov, at the BPX Conceptual Design Meeting.

Photo: Dietmar Krause

BPX Design Successful

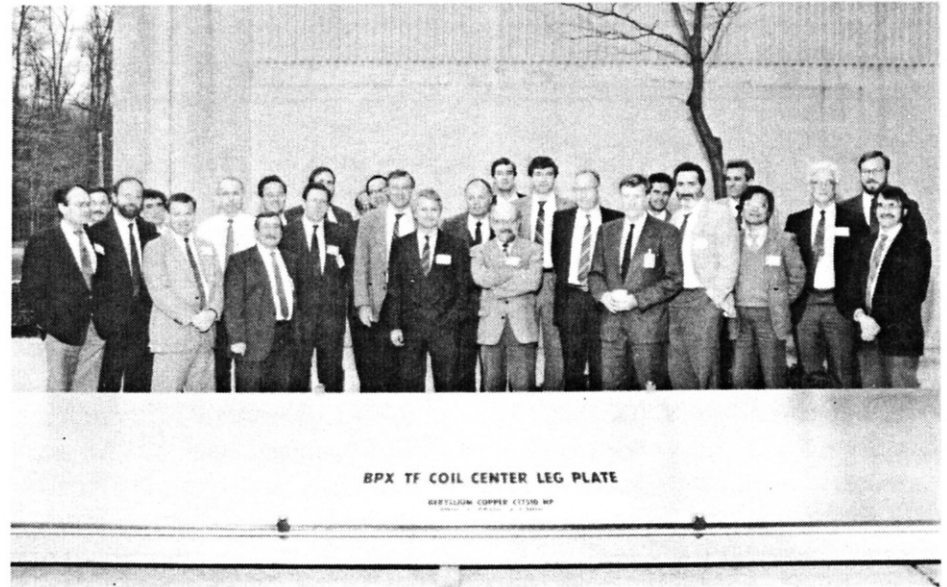
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worth it, according to Bob Simmons, Head of the Project Control Section of BPX. He notes that this review is a key element in obtaining construction review by Congress, adding, "We couldn't be more pleased with the results."

The review panel was to answer five questions presented to them by the Department of Energy (DOE). The questions relate to soundness of design, capacity to perform, costs, recommended changes, and other comments. A brief summary of the panel's answers is given below.

- The physics design is sound and is likely to achieve the project's objectives.
- The engineering approach for the BPX device is well-conceived and provides a sound basis for detailed design.
- The cost estimates for the project are sound, with some need for adjustments on the subsystems level.
- Timely development of the project is crucial, because of its importance to the progress of international work in fusion. It is therefore recommended that funds be made available to accelerate the process.
- All reasonable design and physics options should be kept open, so that they remain viable as understanding evolves.

In addition to these points, the panel offered about 100 documented comments (chits) that can be incorporated as part of the next design phase. Schmidt says, "We are enthusiastically beginning to lay out plans to complete the next phase, which is Preliminary De-



BPX reviewers, observers and assistants, and Princeton Area Office and Department of Energy personnel with the BPX Toroidal-Field Coil Center Leg Plate. The plate is the first of its kind to be made at full scale. Its production demonstrates that it can be done. It will be cut up and tested against BPX requirements.

Photo: Dietmar Krause

sign. Each subsystem will have its own design schedule, and the entire process is expected to be complete within two years."

Schmidt also observed that the excellent results of the review provide the atmosphere needed to build up engineering expertise to the level necessary for final design, scheduled to begin in fiscal year 1993, and construction, scheduled to start in July of 1994.

The positive response to the project is summarized by John W. Willis, Director of the Division of Confinement Systems, Office of Fusion Energy, Office of Energy Research. In a letter to John Schmidt, dated March 29, he says, "I would like to express my appreciation to you and the whole national design team for the work that went into developing and presenting the Conceptual Design for the Burning Plasma Experiment. We recognize the magnitude of the dedicated and conscientious effort

by the team in bringing about what I believe was an extremely successful review of the Project...the entire Project team should take great pride in the accomplishment of this significant milestone. Well done!" ■

HOTLINE

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Dori Barnes Honored

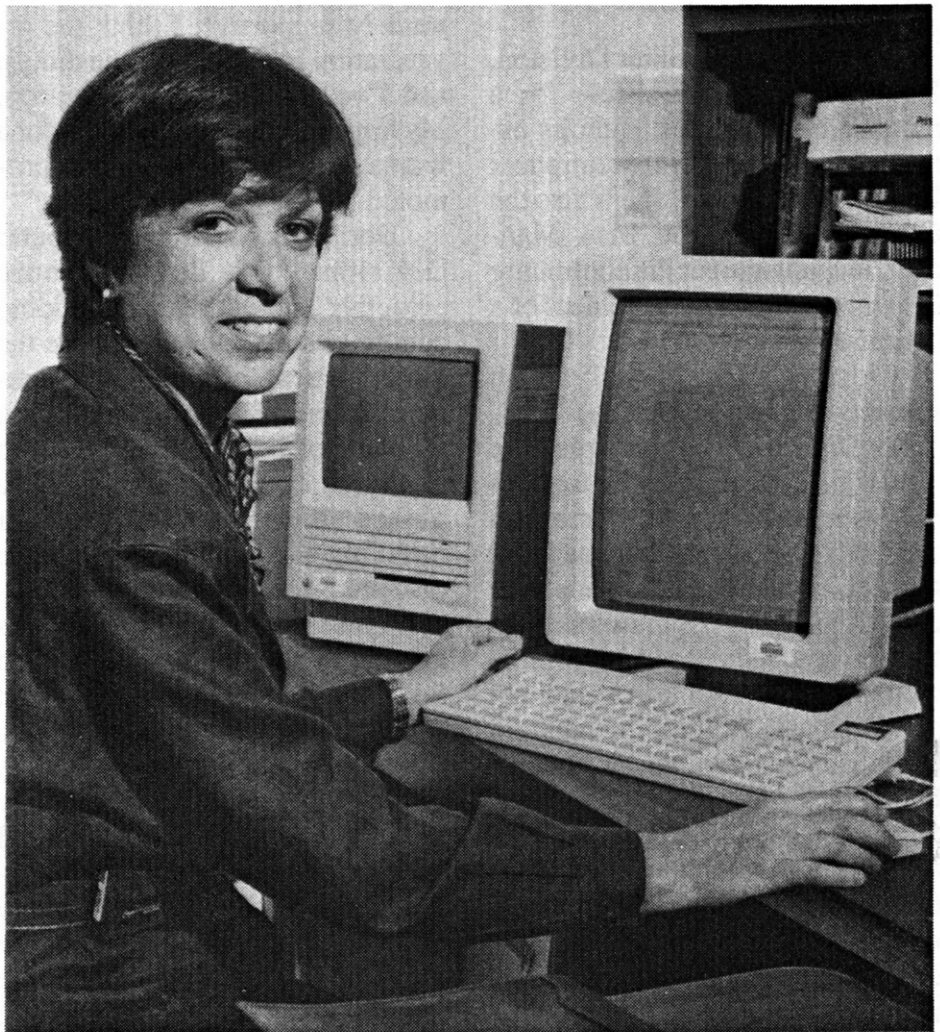
TWIN recognizes career achievements

Dori Barnes, Head of the Computer Division at PPPL, recently received the 1991 Tribute to Women in Industry (TWIN) Achievement Award. TWIN honors women who have made outstanding contributions in their fields and simultaneously recognizes employer firms that have made such success possible. TWIN, a nationwide program of the YWCA, is in its eighth year in the Princeton area. Says Director of Personnel Steve Iverson, "Dori is a most dynamic and respected manager. She truly deserves this award, and I think it's great she won."

A sample of titles of others who have won the award in the past include: Head, Consumer Electronics/Integrated Circuits Research at David Sarnoff Research Center; Director, Geopolitical Industry Issues, Bristol-Myers Squibb; and Treasurer, Rhone-Poulenc, Inc. "A record number of highly qualified women were nominated this year, making the selection of honorees difficult," said Shirley M. Bishop, Chairperson of the TWIN program.

Dori Barnes is well-known and well-liked at PPPL. The Head of one of the largest divisions at the Lab, she manages a staff of 70 engineering and technical staff, with a budget of \$10 million. She handles long-range technical and staff planning for three computer centers containing \$15 million worth of computer hardware.

During her 13 years at the Lab, Dori has served in several roles in the computing area. She started in October, 1977 as a Software Engineer, eventually becoming Section Head for Diagnostic Applications. She moved up to Deputy Branch Head of Software and then to Branch Head of Computer Opera-



Dori Barnes, TWIN award honoree, with the tools of her trade.

Photo: Dietmar Krause

tions before achieving her present position.

Comments around the Lab concerning Dori's professional and personal abilities stand out as particularly positive. "She's a super person, with excellent skills. I have nothing but praise for her and her work," says Ginny Zelenak, who was formerly her secretary and is now User Support Coordinator for the Microcomputer User Support Group.

Paul Funk, Manager of Systems Planning and Integration, notes, "I've known Dori a long time, since we've been in the same department

our entire PPPL careers. She's down to earth and not threatened by her subordinates. In fact, she takes advantage of their strengths and really encourages them. She treats everyone as a human being."

That thought is often re-echoed when people describe Dori. "She's always looking out for people," says Sue Murphy, who was recently promoted to Manager of Certification and Training. "She runs an efficient organization, but what makes her such an outstanding manager is that she's more con-

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Dori Barnes

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cerned with people than with things."

Within the Computer Division, Dori has been responsible for a number of initiatives, such as establishing The Microcomputer User Support Group. She is also the Computer Protection Plan Manager, responsible for the continuing development and management of a computer security plan.

Dori is often involved in projects that go beyond the Computer Division. For example, she received accolades for the innovative, energetic way she approached the 1990 United Way Campaign at the Lab. Under her direction, the campaign was cut from two months to two days. Preceded by significant publicity, the campaign resulted in a significant increase in funds donated and an increase in number of employees who gave. Says Murphy, "The way Dori ran the United Way Campaign is a good example of her overall style. She's not afraid to experiment with new approaches. Her attitude is, 'Why not? Let's try it!'"

Sometimes her additional projects take up a significant amount of Dori's time. For example, she recently chaired three grievance panels. The panels review employee challenges to dismissal or disciplinary actions. Grievance panels are given top priority, according to Dori. She also serves as Sexual Harassment Officer and is on the Hay Committee, which evaluates administrative job descriptions. Yet she still makes time to work with her Division to mentor high school students and college coop students who work at PPPL.

In reflecting on her rise through the PPPL organization, Dori observes, "It hasn't always been easy,

but some people have been extremely supportive. I think the organization has learned some things, and I've done some learning too. My hope is that it's now easier for a woman to be recognized and promoted than it was 13 years ago."

Dori's vision for the Computer Division is to develop more proactive approaches to providing computer services, such as the establishment of the Microcomputer Users' Support Group. She says one of her current goals is to establish a strategy and begin a phased implementation plan for installing and supporting lab-wide computer connectivity.

If her success in meeting this goal is typical of her success in fulfilling personal aspirations, it will probably happen. She says, "Two of my goals have been to break 100 at golf and to visit all fifty states. Now I've broken 100, and I only have one more state to go—Alaska." Knowing Barnes, she will probably soon visit the land of the midnight sun, lower her golf score while she's there, and at the same time make a lot of new friends.■

A dinner honoring the TWIN award winners will be held on Thursday, May 16, at the Princeton Marriott. Tickets are \$65, and reservations can be made through Mary Ann Brown at extension 3045.



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Ladies' Clothing—size three, like new. BO. Call Carol Hirschman, ext. 3529.

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What's Happening at PPPL?

NJ Commission to Meet at PPPL

The New Jersey Commission on Science and Technology will be at PPPL for their annual meeting on Tuesday, April 23, according to Assistant Director Rush Holt. The goal of the Commission is to encourage investment that will support scientific and technological endeavors in the state. "The Commission is also committed to working with federal laboratories to stimulate technology transfer activities," according to Associate Director of the Commission Joe Montemarano.

One Commission project has been the sponsorship of the April, 1991 advertising supplement to *Scientific American* magazine titled *New Jersey: the Invention State, Technology for Economic Growth*. This publication includes a discussion of the X-ray laser microscope technology developed here at PPPL.

The Commission includes 17 representatives of public and private businesses and industries as well as legislators, and is chaired by Dr. James F. Mathis, former Vice President for Science and Technology at Exxon. The Vice Chairman is former Chairman of the Board at Bell Laboratories Dr. William O. Baker.

According to Holt, "We invited the Commission to meet here so that they will get to know PPPL better." Commission members and other attenders will have an opportunity to tour the Lab during the day.

Visiting Scientists Needed in Local Schools

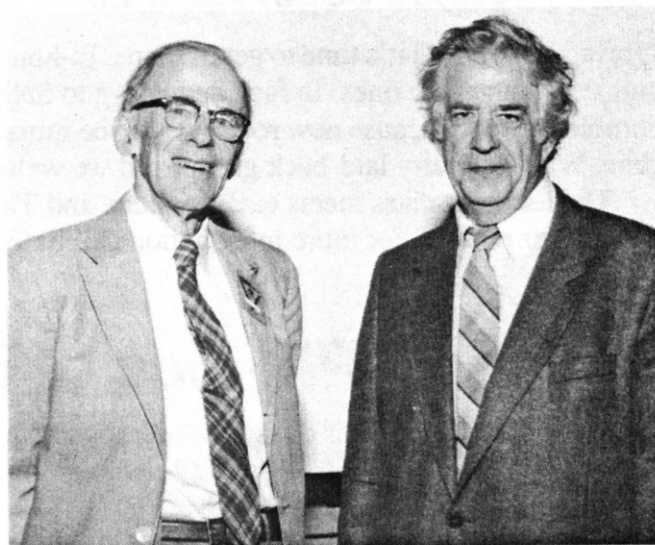
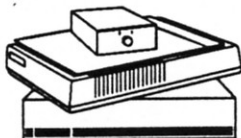
Children are more likely to pursue scientific activities if their interest is stimulated at an early age. That's why three West Windsor elementary schools are starting a Visiting Scientists Program for children in grades K through six, according to Deborah Cohen, Science Consultant and project coordinator for the schools.

"This is an excellent opportunity for PPPL research, engineering, and technical staff to serve the community, especially those who have children in these schools," notes Diane Carroll, Head of the Science Education Program here. She adds, "Speakers may choose a topic of interest to them—whether it be job or hobby-related. Some topic ideas are: fusion, lasers, magnets, energy, electricity, and electric circuits."

Opportunities to speak are available both this spring and during the fall school term. Please call Diane Carroll, extension 2107, for sample activities, materials, and equipment. To sign up for the program, call Deborah Cohen at 275-4742.

Products Show

On Thursday, May 9, a Tektronix Multi-Division Product Show will be held in the second floor LOB Commons area from 9:30 a.m. to 3:00 p.m. State-of-the-art products will be on display, including: digitizers, spectrum analyzers, logic analyzers, pulse generators, and graphic terminals. Engineers and other interested staff are invited.



Dr. Lyman Spitzer, Jr. (left), founder and first Director of PPPL spoke on "Results from the Hubble Space Telescope" on April 10. He is shown with Wolfgang Stodieck, Co-chair of the Colloquium Committee. Photo: Dietmar Krause

American Soldiers Still Need TLC Packages

The Persian Gulf War may be over, but between 200 and 300 thousand American soldiers remain in the Saudi Arabian desert. Undoubtedly they miss the comforts of home more than ever. Marilyn Hondorp and Barbara Sobel are continuing Operation Desert Help—collecting items and sending care packages to American soldiers.

Marilyn says, "Since the war ended the soldiers get less media attention, and we tend to forget that they still need our packages as much as ever. We'd like to send a package every month until at least July, and we hope everyone will contribute as generously as they have in the past."

Because sand fleas get into their clothing, the soldiers appreciate having flea collars to wear around the tops of their boots. *Unscented* soaps and creams are best, because perfumed items attract snakes. Please avoid items that are religious in nature, and do not gift wrap. Also, stay away from meltable items and those that contain alcohol.

Please deliver your contributions for the next package by Friday, May 10 to either Marilyn Hondorp in LOB368, ext. 2656, or to Barbara Sobel in LOB374, ext. 2602. Pickups can also be arranged.

Here's a list of items that would be especially appreciated:

- Flea Collars, Unscented
- Flea Repellent
- Chapstick
- Sunblock
- Skin Lotion, (especially with aloe)
- Baby Powder
- Wet Wipes
- Toilet Paper
- Personal Hygiene Items
- Thermal Long Underwear
- T-Shirts
- Videos
- Blank Cassettes
- Music Cassettes
- Batteries for portable radios
- Playing Cards
- Pens and Pencils
- Crossword Puzzles
- Softballs
- Stationary
- Envelopes
- Stamps
- Instant Tea
- Instant Coffee
- Creamora
- Kool Aid
- Tang
- Cookies/Snacks
- Hard Candy/Gum
- Dried Fruit

Join Aerobics

New routines begin April 29

Spring is here, and it's time to get in shape. In-house aerobics is a convenient, fun way to break your old routines and start some new ones. In fact, according to Sally Connell, Monday, April 29 is an excellent time to join the aerobics group, because new routines will be introduced. However, she adds, "You can really join aerobics any time. We're a pretty laid-back group, and we welcome newcomers."

The aerobics class meets each Monday and Thursday from 5:15 to 6:15 in the LOB Commons. The cost is \$32.00 per month. For more information call Sally Connell at 3206.

Wanted—Physics of Fluids Classics

Back numbers of Physics of Fluids—reasonable price paid for these issues: Vol. 1 to Vol. 3 (all); Vol. 7, No. 6; Vol. 9, No. 9; Vol. 10, No. 4; Vol. 12, No. 8; Vol. 13, No. 6 and No. 8; Vol. 15, No. 3 and No. 9; Vol. 16, No. 8. Call S. Yoshikawa at ext. 2497.