

41 Inventors Receive \$ Awards

In December, just in time for the holidays, PPPL inventors received financial awards totaling \$5100 for fiscal year 1991 through the PPPL Patent Awareness Program. According to Patent Committee Chair John Johnson, the Patent Awareness Program was established to recognize creative inventors, foster invention disclosures, and raise

the awareness of Laboratory staff about the importance of patents.

During FY91, two patents and one Statutory Invention Registration (SIR) were issued. (An SIR is awarded for an invention that does not have enough commercial value at this time to warrant a patent but is registered to avoid patent to oth-

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Science on Saturday Draws Record Crowds

“What do 250 donuts, plus 250 high school students, plus 8 scientists equal?” According to Dennis Manos and Larry Lagin, Program Chairs of the Princeton University Plasma Physics Laboratory’s Science on Saturday program, they equal “the U.S. getting excited about science again.”

The renewed excitement is reflected in the fact that the first program, on January 11, drew an overflow crowd to the M.B. Gottlieb Auditorium. And no wonder! The topic was “Pleasure Mechanisms in the Brain and their Role in Drug Abuse.”

For the past eight years, the PPPL Science on Saturday program has provided free lectures and demonstrations for high school students. Topics come from the forefront of scientific research in a variety of disciplines. The lectures are provided by Princeton University faculty,

PPPL researchers, and scientists from other universities and industry.

The program, which started as a volunteer grass roots effort by several PPPL physicists and engineers, has been recognized as a model science education program. “Kids need to feel as excited as we did while growing up in the fifties and sixties,” says physicist Manos. “They also need to see that science

is not just for nerds—that scientists are ordinary people who have fun in what they’re doing and who make a good living doing it.”

The program is open to all local high school students, parents, teachers, and community members as well as PPPL staff members and their families. “It’s especially gratifying to see parents coming with their children to the lectures,” said Diane Carroll, head of the Science Education programs at PPPL.

As one parent wrote, “I started to come just as a chauffeur to my son. I became so interested that when he couldn’t attend, I came anyway!”

Each year, the program runs from January through March. “We try not to repeat topics during a four year period, so that students can be exposed to many different research topics,” says engineer Lagin. This year’s program features lectures on

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Lectures and demonstrations highlight Science on Saturday program.
Photo: Denise Applewhite

Young Is Director of Human Resources



Photo: Denise Applewhite

Margaret Young, Director of Human Resources.

Margaret Young is the recently appointed Director of the Division of Human Resources (formerly the Personnel Division) at PPPL. Young was previously Director of Compensation for Princeton University. Before that she had served as Director of Employment since joining the University in 1989.

Young notes that her first task is getting to know Laboratory employees, their responsibilities and needs. She says, "I am continuing to meet with various managers and with groups of employees to discover more about their departments and to hear their concerns related to Human Resources. I look forward to learning about their work and to providing as much information as possible about how we can help them."

Observes Steve Iverson, Head of the Office of Human Resources and Administration, "The decade of the 90's will require knowledge-based organizations to upgrade and enhance the skills of current work-

ers, will use more employee capacity, and will recognize that the Information Age is a stressful time. Family issues will continue to assert themselves in the work place. Margaret is eminently qualified to lead PPPL through the complex issues that will confront us."

Iverson notes that the new name—Human Resources Division—reflects

the contemporary trend of the profession to be extensively people-oriented and to deal with a broader range of human resource issues.

According to Young, the Division is responsible for the following major areas: employment, compensation, employee relations, career and employee development, and training (in conjunction with the PPPL Certification and Training Division). She says, "We're especially interested in being sure that managers are appropriately trained to provide useful, fair and effective performance evaluations so that employees can both be rewarded appropriately and improve performance where necessary."

Training personnel in appropriate policies and procedures is also very important, as is providing thorough orientation to new employees. Says Young, "When I meet with staff members, I'll be asking how we can help new employees acclimate themselves to the work environment and understand the

resources available to them. With this information, we'll then be able to provide an expanded orientation program. We would also like to see employees who have been here six to eight years be provided with a variety of opportunities for increased responsibility."

Observes Young, "The Human Resources Division has as one of its main roles to provide information to managers so that the Lab can meet its obligations to follow various government rules and regulations. One very important issue at Princeton is affirmative action and diversity in the work force." She notes that equal opportunity concerns are a Princeton University priority at this time—as reflected in the fact that President Harold Shapiro has appointed an Advisory Committee to examine the issues.

Young, who was originally trained as a chemist, is particularly interested in seeing more women and minorities become involved in the sciences. In 1979, after raising her family, Young returned to school and earned her MBA in Human Resources Management from the University of Buffalo. She observes, "Having followed this path myself, I'm most interested in encouraging others to consider the route of the nontraditional student—to retool and thereby enrich their work lives."

Young worked in a variety of human resource capacities in other organizations before joining Princeton University in 1989. The Princeton connection is a distinct plus. Says Young, "One way in which I can add value here at PPPL is through my knowledge of the resources available to Lab employees on the University's main campus."

Inventors

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ers.) In addition, four patent applications were made, and 19 inventions were disclosed. Congratulations to all the inventors, and keep up the good work!

Statutory Invention Registration Issued

Thermonuclear Inverse Magnetic Pumping Power Cycle for Stellarator Reactor

Darwin Ho*
Russell Kulsrud

Patents Issued

Hydrogen Isotope Separation Utilizing Bulk Getters

Randy Knize*
Joseph Cecchi

An Optically Pumped CH₃OH Laser with a Stark-Tuning Capability and with a Fluid-Cooled Cavity

Dennis Mansfield
Michael Vocaturo
Larry Guttadora

Patent Applications

Method of Measuring the Momentum, Energy, Power, and Power Density Profile of Intense Particle Beams

George Gammel
Henry Kugel

Plasma Momentum Meter for Momentum Flux Measurements

Fulvio Zonca
Samuel Cohen
Timothy Bennett
John Timberlake

Toroidal Magnetic Detector for High Resolution Measurement of Muon Momenta

Peter Bonanos

Reflection Soft X-Ray Microscope

Szymon Suckewer
Roy Rosser*
Charles Skinner

Inventions Disclosed

Controllable DC Power Source Using Battery and AC Power

George Bronner
Daniel Huttar
Charles Neumeyer*

Discharge Pumped Soft X-ray Laser

Lewis Meixler
Szymon Suckewer

High-Sensitivity Stimulated Emission Detector

Charles Skinner

Hot-Cathode Preionization for Tokamak Discharges

Douglass Darrow
Masayuki Ono

Perveance Function

Thomas O'Connor
Michael Williams

A Method for Coating Tokamak Components with Thick (~10 μ per coating) Carbon Films

John Timberlake

Improved Compact Plasma Source for Neutral Particle Surface Alteration

Robert Motley
Samuel Cohen
Dennis Manos

Cleanup Apparatus of the Super-Cooled Vacuum Wall

Shoichi Yoshikawa

Solar-Operated Refrigerated Units

Shoichi Yoshikawa

Geometric Current Drive Startup Scenario for a Low-Aspect-Ratio Tokamak and Toroidal Trapped Particle Confinement Configuration

Cary Forest
Masayuki Ono

Method of Improving Tokamak Confinement by Internal Biasing using Lost Heavy Atom Beam

Michael Zarnstorff

Photopumping Technique for a VUV Laser in Molybdenum

Kevin Ilcisin
Szymon Suckewer

Electron Cyclotron Emission Diagnostic for Measuring Radial Diffusion of Lower Hybrid Current

Sherrie Preische
Cary Forest

Coaxial Plasma Gun with Water-Cooled Center Conductor

Robert Motley
Harvey Evans

X-Ray Lithography with Tokamak Radiation

Szymon Suckewer
L. Bromberg*
D. Cohn*

Method of Producing High-Field Gradients in Plasma

Nathanial Fisch
Jean Rax

Halon Liquid Level Determination

Carl Potensky

A Device to Produce Lasing Action at Wavelengths of 40 Å and Below

Ernest Valeo
Steven Cowley

Filter Cleaning Station

Ramon Pressburger

*non-PPPL employee



Occurrence Reporting



The Department of Energy wants to keep close tabs on what's happening at its facilities around the country through the mechanism of Occurrence Reporting. PPPL is no exception, and DOE order 5000.3A describes how such reporting is done.

According to J.W. Anderson, unusual events and incidents need to be reported, and such reports usually start with the employee. Says Anderson, "There are certain events or incidents which require submission of an Occurrence Report to the DOE. For example, any time em-

ployees become aware of a hazardous spill, a personal injury, or unexpected equipment failure or equipment damage, it should be reported immediately to one's supervisor." (If necessary, emergency response can be requested by calling extension 3333, which sets emergency procedures in motion). The supervisor evaluates the seriousness of the problem and whenever appropriate, reports the information by calling 2536, the Security Desk. The on-duty facility manager can then be reached almost anywhere in the United States via a satellite pager.

The facility manager then evaluates the situation, assesses the cause of the event and specifies appropriate corrective actions to prevent recurrence. The last step of the process includes submitting a written report to the DOE.

Since September, 1990, when this DOE order became a requirement, DOE facilities have filed over 8000 Occurrence Reports, with 64 of them submitted by PPPL. Says Anderson, "Occurrence Reports are valuable not only to keep DOE informed, but also because reports are entered into a common data base which allows all DOE facilities to share information and lessons learned."



Law Enforcement Awareness

PPPL employees are known for integrity and individual responsibility on the job, so ideally, you'll never need the avenues that are available to report crime, waste, fraud, and abuse of federal property.

Nevertheless, in case of suspected negligent or criminal conduct, it's important to know what to do. You may report such activity in confidence to your supervisor, the

supervisor's manager, or the division head. In certain circumstances, you may opt to bring the matter directly to the attention of J.W. Anderson, Manager of the Emergency Preparedness Division or directly to the local law enforcement agency. Anderson will then work with the appropriate agencies of Plainsboro Township, Middlesex County, and the federal govern-

ment, to investigate the report.

Another option open to you as an employee is to telephone the 24-hour Employee Hotline maintained by the Office of the Inspector General of the U.S. Department of Energy. To report fraud, waste, or mismanagement, phone the toll-free number at 1-800-541-1625. The commercial number is 1-202-586-4073; the FTS number is 896-4073.

Science on Saturday

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neuropsychology, engineering, astronomy, applied physics, paleontology, materials science, and physics.

All lectures are held on Saturdays starting January 11 at 9:30 a.m. in the M.B. Gottlieb Auditorium. There is no fee for the program. To register or to get further information, call the Science Education Office at 2106. Funding for refreshments (including the donuts) is provided by the local chapters of

the American Vacuum Society.

Lectures already presented are: "Pleasure Mechanisms in the Brain and their Role in Drug Abuse" given by Professor Bart Hoebe of Princeton University and "Sun Dragon: The Making of a Solar Car," by Professor Michael Barsoum, Drexel University. Upcoming talks are listed below.

February 1: *Deep Sky Telescope Observations*—Professor James Gunn, Princeton University.

February 8: *Sending Sound and Pictures with Lasers*—Dr. Gordon Thomas, AT&T Bell Laboratories.

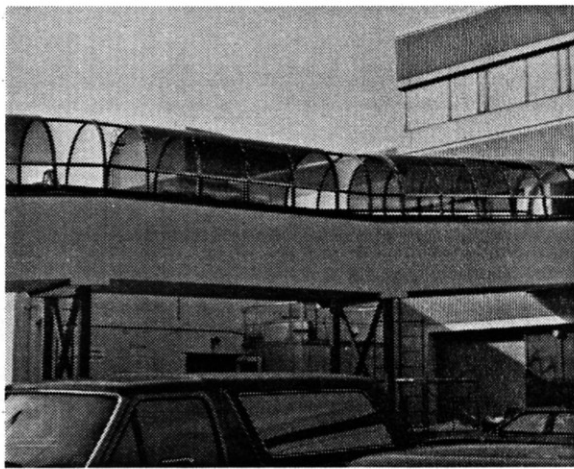
February 15: *What Killed the Dinosaurs?*—Professor Peter Dotsin, University of Pennsylvania.

February 22: *Engineering Materials: The All-Ceramic Engine*—Professor Bernard Kear, Rutgers University.

February 29: *Is There Order in Chaos?*—Dr. Charles Karney, Princeton University Plasma Physics Laboratory.

March 7: *Galaxies and the Universe: Stages of Evolution*—Professor Ruth Daly, Princeton University.

What's Happening at PPPL?



Here are two views of the new pedestrian bridge between the second floor of LOB and the second floor of the Engineering Wing. The bridge, which is almost ready for use, will provide convenient, indoor access between the two buildings and will ease access for people with disabilities.

Photos: Denise Applewhite

PPPL employees who retired in FY91 were feted at a gathering on November 25 in the M.B. Gottlieb Auditorium. Each retiree was presented with a gift in gratitude for service to the Lab. Some of the retirees are shown along with Lab staff during the reception in the LOB Commons.

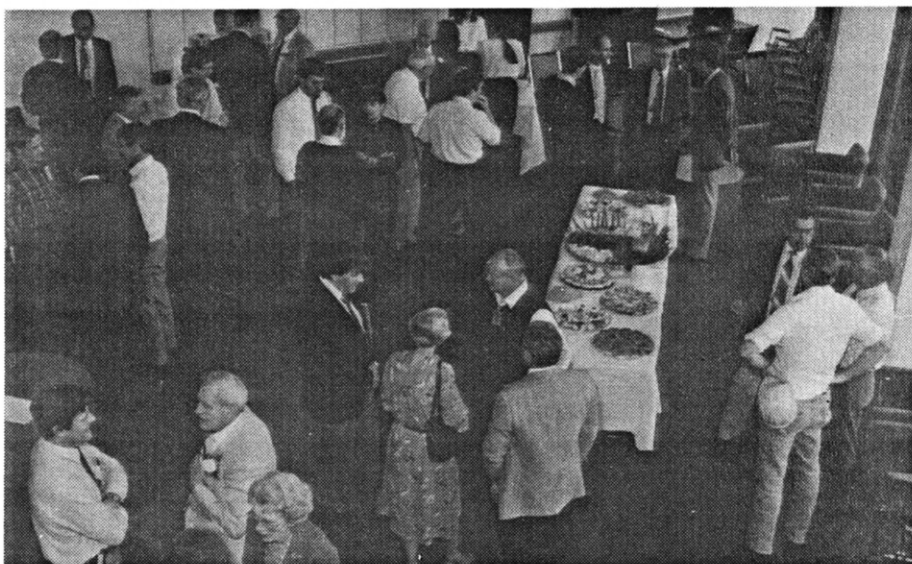
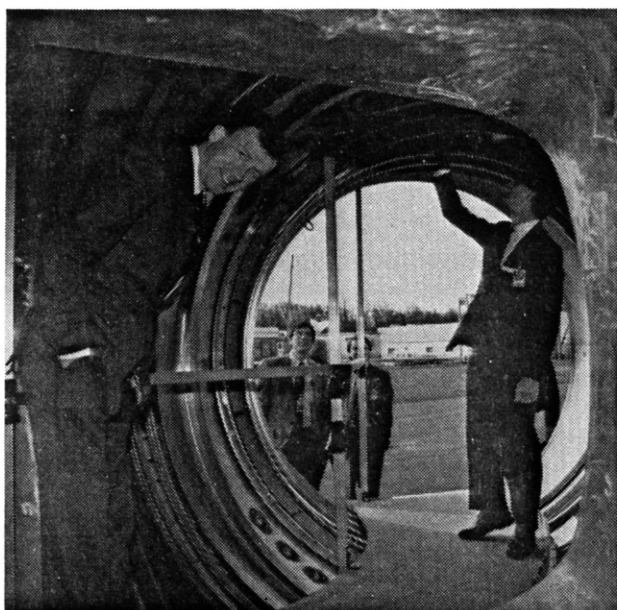


Photo: Denise Applewhite



Pennsylvania Representative Peter Kostmayer (left) visited PPPL on December 16 to learn first hand about fusion research. Kostmayer is exploring alternatives to fossil fuels in his capacity as Chairman of the Energy and Environmental Subcommittee of the House Committee on Interior and Insular Affairs. Dean Tousley, Counsel for the Energy and Environment Subcommittee, is to the right of Representative Kostmayer in the mock-up segment of the TFTR vacuum vessel.

Photo: Denise Applewhite

TRANSITIONS

Births

Congratulations to **Alicia Ehrhardt** of the Engineering Division and her husband William on the birth of their daughter Rebecca Ann born December 12, 1991.

Best wishes to **Jules Nemeth** of Facilities Engineering and his wife Sharon, proud parents of a son, Christian born December 25.

All the best to proud mother **Joann Palladino** of the Procurement Division and proud father Peter whose new son Nicholas came January 4.

Daughter Elizabeth Kent was born to **Brent Stratton** of TFTR Diagnostics and wife Gayle on December 16. All the best!

Congratulations to new mom **Diana White** of the Computer Division and husband Russell on

the arrival of their daughter Katelyn Rose on December 21.

In Memory

Bobbie Gates, wife of former employee Hobie Gates, died November 11. Gates worked in the Accounting Department for more than 25 years.

Thomas A. Goedert died December 11. Employed since 1979, Goedert was an administrator in Materiel Control at his retirement in 1989.

Charles A. Pavlov died December 4. Pavlov was employed as a technical associate in Engineering Services for 25 years, retiring in December of 1982.

Chester V. Ptak died December 9. He was an engineer in Cryogenics at the time of his retirement in 1990, and had worked at the Laboratory for ten years.

CLASSIFIEDS

For Sale

Black metal stereo rack from IKEA; \$15. **TV cart**; \$5. Call Gretchen Skelly at 3635.

The Boss Vacuum Cleaner, one year old—you name the price! Call Ann Wadkins at 883-3713.

For Rent

Two bedroom condominium, with two full baths, all appliances. Country setting at Heritage Crossing. Close to 95 and train; \$800 per month. Call Jeff (734-5267) or Ann Wadkins (883-3713.)



ESU FIRE SAFETY TIP

Place portable heaters at least 36 inches (three feet) away from things that burn, such as paper, bedding, clothing, or curtains. Keep small children away from space heaters. And remember, always turn off the heaters when you go to bed or leave your home. Be sure your space heater is labelled by a recognized testing laboratory.

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