

HOTLINE

The Princeton Plasma Physics Laboratory is a United States Department of Energy Facility

PPPL Receives Dwight D. Eisenhower Award

In recognition of its outstanding record in subcontracting to small businesses, PPPL recently garnered the Dwight D. Eisenhower Award from the U.S. Small Business Administration (SBA). SBA officials presented the award to PPPL Director Rob Goldston on Thursday, June 10, during a procurement conference in Washington, D.C. PPPL was one of three to receive the citation this year.

"We are very pleased to receive the Eisenhower Award this year from the Small Business Administration. Rod Templon and Arlene White have been outstanding in their ability to find win-win opportunities for our research and for small businesses," said Goldston. Templon is PPPL's Procurement Head and White is PPPL's Small Business Liaison. They joined Goldston in accepting the award on behalf of the Laboratory.

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From left are Rod Templon, Rob Goldston (holding the Eisenhower Award), and Arlene White.



The inventors recognized at the Patent Dinner are, from left (front row), Charles Skinner, Henry Kugel, Manfred Bitter, and Kenneth Hill; (second row) Yevgeny Raitses, Wolfgang Stodiek, and A. Lane Roquemore; (third row) Amnon Fruchtman, Cynthia Phillips, Szymon Suckewer, and Robert Woolley; (fourth row) Schweickhard von Goeler, James Gorman, and David Mikkelsen.

Inventors Honored

On June 29, the Laboratory celebrated the inventions of thirty-three individuals during the Fiscal Year 1998 Patent Recognition Dinner held at Princeton University's Prospect House.

"Inventors are an exiting bunch of people to work with. They are pushing the limits, and trying to create new

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Princeton Large Torus Removed and Scrap Sold



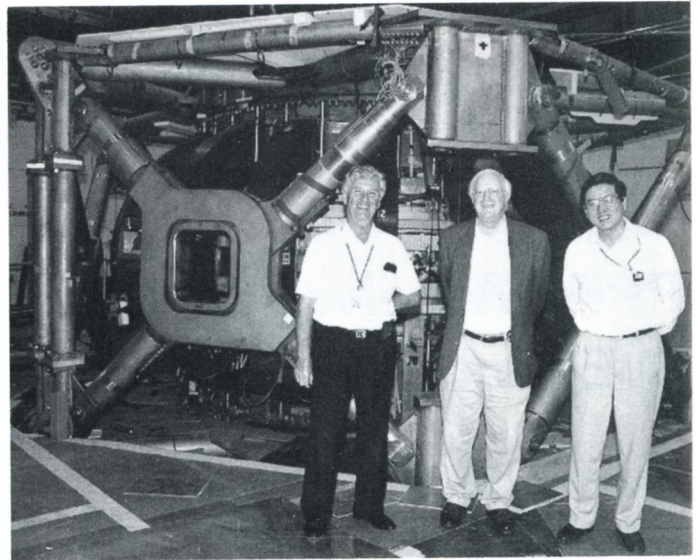
PPPL'ers take one last look at PLT before it is taken apart and sold for scrap. From left are Will Derry, Jim Chrzanowski, Fred Dahlgren, Tom Meighan, and Phil Heitzenroeder.

An independent wrecking crew is lugging away 212 tons of metal from the Princeton Large Torus (PLT) test cell — and paying for the privilege.

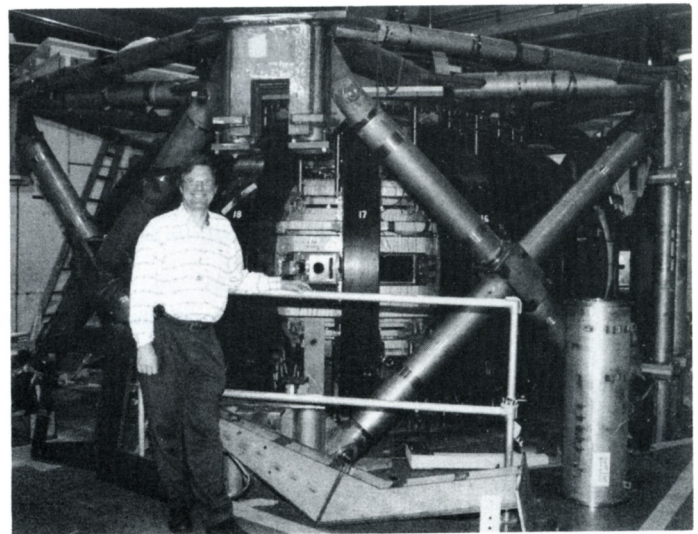
Mercer Wrecking and Recycling Corporation won the bid for the removal of PLT and last month began the 12-week project of breaking apart PLT and hauling it away for scrap metal. The PLT tokamak is made of copper poloidal field and toroidal field coils, insulating compound, and stainless steel. The project entails removing the device and its supporting platform down to the concrete floor.

Prior to the removal, PPPL staff disconnected all electrical and mechanical systems from the PLT tokamak, which is not contaminated. The PLT operated at PPPL from December of 1975 until December of 1986.

The removal of PLT clears the facility for future projects at the Laboratory. ●



From left are Alex Ilic, Joel Hosea, and Masa Ono.



Ned Southoff poses next to PLT.

HOTLINE

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Inventors

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ways of doing things, and in the course of their work are always questioning things that we all tend to take for granted," said Lewis Meixler, Chairman of the Lab's Committee on Inventions.

Meixler, who is also Head of Technology Transfer at PPPL, said there have been 676 invention disclosures filed by the Lab since it was established in 1951. Of those, 70 U.S. Patents have been awarded. "This averages out to 14 disclosures a year and about 1.7 patents annually," said Meixler. In 1998, there were 15 disclosures and two U.S. Patents awarded. Meixler also discussed a recent Su-

preme Court decision that will affect patent protection and a potential future test of the patent laws in the field of biology and genetics.

PPPL Director Rob Goldston, who presented the inventors with certificates, noted, "Fusion energy is critical to humankind in the long-term, and the spin-off technologies being honored tonight also demonstrate the value of plasma science and technology in the near-term."

The Committee on Inventions includes C.Z. Cheng, Sam Cohen, Dave Cylinder, Phil Efthimion, Terry Greenberg, Rich Hawryluk, Steve Jardin, Henry Kugel, Carol Phillips, Mike Williams, Ken Young, and Chairman Lewis Meixler. ●

Patents Issued in Fiscal Year 1998

Traveling Spark Ignition (TSI) System

Szymon Suckewer and Enoch Durbin

Method and Apparatus for Steady-State Magnetic Measurement of Poloidal Magnetic Field Near a Tokamak Plasma using only Fixed Air-core Electrical Coils and a Mechanical Strain Gauge

Robert Woolley

Patents Applied for in Fiscal Year 1998

Method and Apparatus for Measuring Micro Structures, Anisotropy and Birefringence in Polymers using Laser Scattered Light

Boris Grek, Joseph Bartolick, and Alan Kennedy

Method and Apparatus to Directly Produce Electrical Power Within the Lithium Blanket Region of a Magnetically Confined, Deuterium Tritium (D-T) Fueled Thermonuclear Fusion Reactor

Robert Woolley

Inventions Disclosed in Fiscal Year 1998

Hall Thruster with Segmented Cathode Electron Injection

Nathaniel Fisch and Amnon Fruchtman

A Hollow Cathode Magnetron

Zhe Hui Wang and Samuel A. Cohen

Hybrid Aircraft: Capable of Flying as a Helicopter, Autogyro, or Fixed Wing Plane

David A. Cylinder

New Type of X-ray Imaging Crystal Spectrometers for Extended X-ray Sources

Manfred L. Bitter, Benjamin Fraenkel, James L. Gorman, Kenneth W. Hill, A. Lane Roquemore, Wolfgang Stodiek, and Schweickhard von Goeler

Synthesis of Ozone at Atmospheric Pressure by a Quenched Induction-Coupled Plasma Torch

Brentley C. Stratton, David R. Mikkelsen, Richard Knight, Elihu D. Grossman, Andreas Blutke, and John Vavruska

Remote Erosion Measurement in a Fusion Reactor

Charles H. Skinner

Generation of Periodic Accelerating Structures in Plasmas

Gennady Shvets, Alexander Pukhov, and Nathaniel J. Fisch

Parametric Amplification of Ultra-short Laser Pulses in Plasma

Gennady Shvets, Alexander Pukhov, and Nathaniel Fisch

Nonneutral Plasma Fusion Trap Device

Cynthia Kieris Phillips

Passive Positioning of Hall Thruster Fields

Amnon Fruchtman and Nathaniel Fisch

In-vessel Dust Measurements by a Quartz Microbalance

Charles Skinner and Henry Kugel

High Energy for Sterilization

John A. Schmidt

Micro Hall Thruster

Nathaniel Fisch and Yevgeny Raitses

Ultra-high-density Feedthroughs and Signal Conduits using Thick-film Printed Circuit Technology

Hironori Takahashi

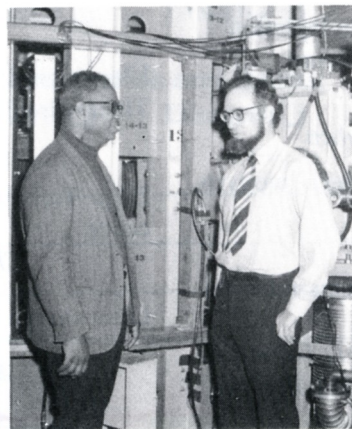
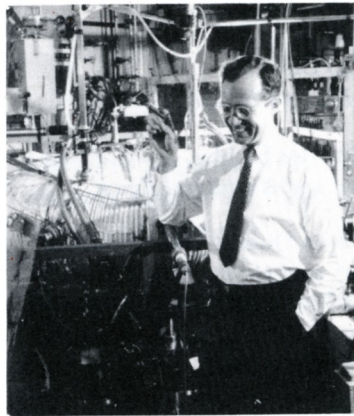
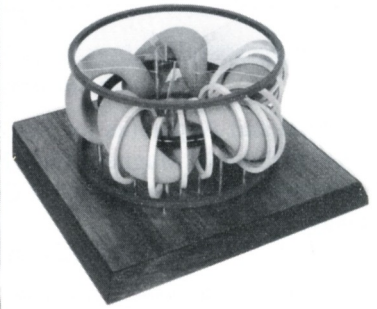
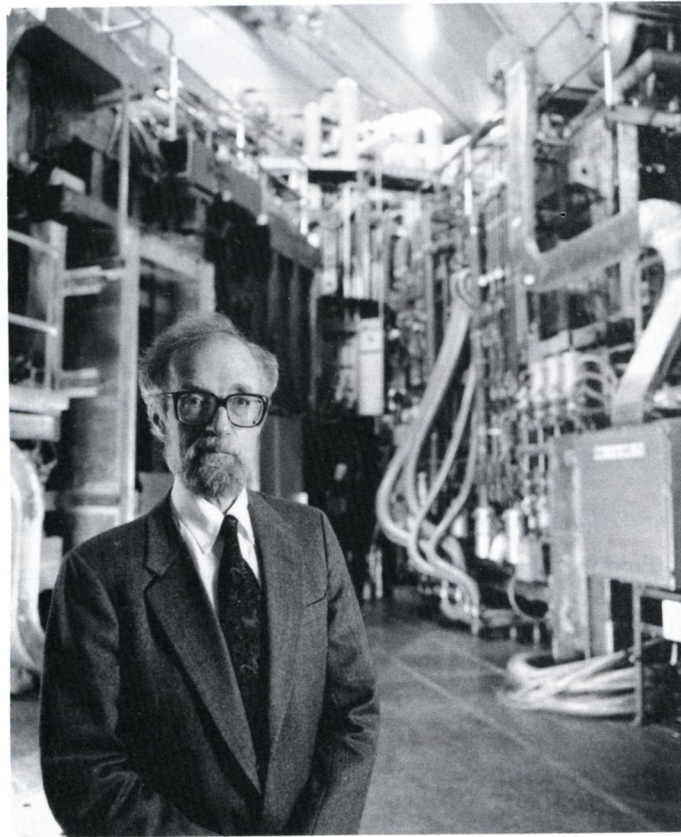
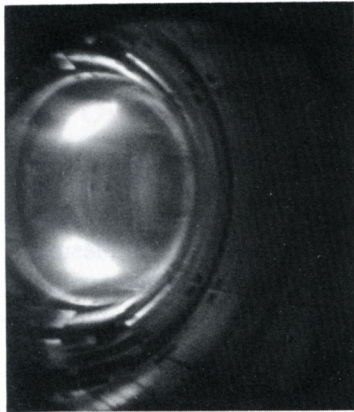
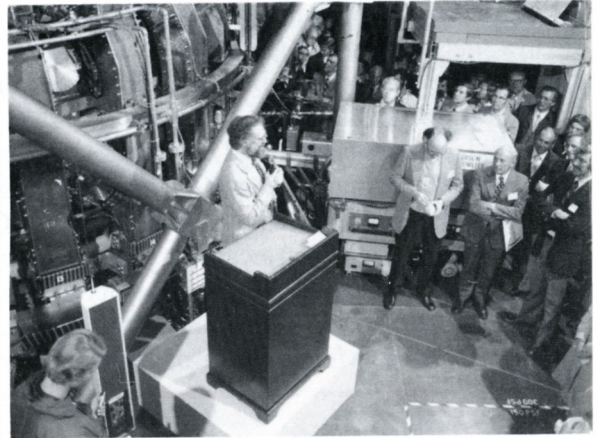
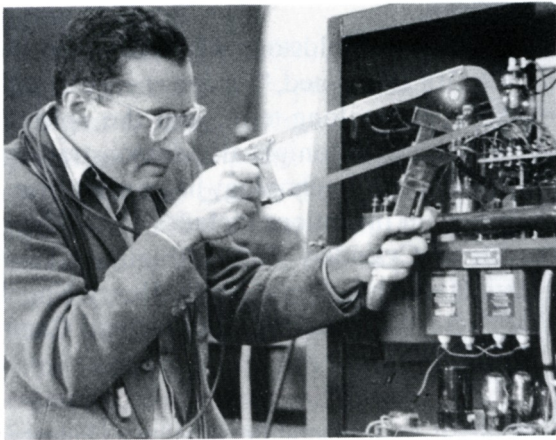
Edge Turbulence Measurement by Laser Induced Fluorescence

Charles H. Skinner and Stewart J. Zweben

Laser-driven Source of Tunable Undulator Radiation

Nathaniel L. Fisch, Jean-Marcel Rax, and Gennady Shvets

Furth Honored with Scientific Symposium at PPPL





Harold P. Furth, former Director of PPPL and one of the “giants” of fusion, was honored during a day-long scientific symposium on June 7 at PPPL. More than 100 people, some from the national and international fusion community, as well as from the Department of Energy and Princeton University, came to the Laboratory to celebrate the life and scientific achievements of Furth. Furth retired on July 1 and became Professor Emeritus of Astrophysical Sciences at Princeton University.

Symposium speakers shared their remembrances of Furth and heralded his contributions to fusion research during the past five decades. Furth, who served as Director of PPPL from 1981 to 1990, launched the record-setting Tokamak Fusion Test Reactor (TFTR) project, which operated for 14 years before closing down in 1997.

A native of Vienna, Furth received a Ph.D. in physics from Harvard in 1960 and worked on controlled magnetic fusion research at the Lawrence Radiation Laboratory (now the Lawrence Livermore National Laboratory) in California prior to joining PPPL in 1967 and being appointed Professor of Astrophysical Sciences at Princeton University. He co-headed the Experimental Division at the Laboratory from 1967 to 1978, when he was appointed Associate Director and Head of the Research Department.

He became Program Director in 1980 and Director of the Lab the following year. Furth holds 20 patents, primarily in the areas of controlled magnetic fusion technology and metal forming with pulsed magnetic fields, and has published more than 200 technical papers. ●

Eisenhower

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Created in 1991, the Eisenhower Award is presented each year to large businesses that operate as federal prime contractors. The award honors those that have excelled in their use of small businesses as suppliers and sub-contractors. Small businesses include small disadvantaged and women-owned firms. PPPL sub-contracted nearly \$8.6 million in Fiscal Year 1998 and provided smaller firms with almost \$5.6 million of that total.



Most Outstanding

PPPL was judged to be the most outstanding of all "research and development" companies nominated from the Small Business Administration's portfolio of 2,500 large contractors. SBA Commercial Market Representative Andrew Zuber nominated the Laboratory for the award. The Eisenhower Award for 1999 also was awarded in the manufacturing category to Bell Helicopter Textron, Inc., of Fort Worth, Texas, and in the services category to Computer Sciences Corp., of Falls Church, Virginia. ●

From left are James Kocsi, Deputy District Director of the Small Business Administration's New Jersey District Office, PPPL Director Rob Goldston (holding the Dwight D. Eisenhower Award), and Andrew Zuber, Small Business Administration Commercial Market Representative.

Hotline Customer Service Survey

Hotline supports the Laboratory's information needs by communicating Laboratory news clearly and effectively.

Strongly Agree ☐ Agree ☐ Neutral ☐ Disagree ☐ Strongly Disagree ☐ No Opinion ☐

Hotline provides useful and accurate information about PPPL news and events.

Strongly Agree ☐ Agree ☐ Neutral ☐ Disagree ☐ Strongly Disagree ☐ No Opinion ☐

Hotline presents information in a creative and interesting manner.

Strongly Agree ☐ Agree ☐ Neutral ☐ Disagree ☐ Strongly Disagree ☐ No Opinion ☐

Hotline responds to requests for special stories and issues.

Strongly Agree ☐ Agree ☐ Neutral ☐ Disagree ☐ Strongly Disagree ☐ No Opinion ☐

Comments, suggestions _____

Please return surveys to A. De Meo, MS-38.

DACW Takes Up Collection for Womanspace

This spring, the Lab's Director's Advisory Committee on Women (DACW) organized a collection for Womanspace, an area shelter for abused women. On June 7, Committee Chairperson Molly Tompkins and DACW member Mary Ann Brown presented the items to Womanspace Executive Director Pat Hart and Womanspace Residential Manager Peggy Weimer. DACW collected clothing, toys, and household items.



The collection filled a van brought by the Womanspace officials. Also given was a monetary donation. Brown organized the effort at the Lab. At far right, Tompkins hands a box of donations to DACW member Phyllis Roney (back to camera). At right, Mary Ann Brown (left), Hart (middle), and Weimer take a break from loading the van. A special thanks goes to everyone who contributed to this year's collection! ●



Towner Receives Award



PPPL's Harry Towner recently received the Stark & Stark EMS Recognition Award. Towner is an emergency medical technician with the Plainsboro Rescue Squad. He was honored by Stark & Stark, a law firm, for 20 years of tireless work and service for the squad and the residents of Plainsboro. Congratulations, Harry! ●

transitions

Retirements

Robert Brown, Deputy Chief of the Site Protection Division, retired on July 1. Brown had been at the Lab for 17 years.

Robert Longmuir, a Construction Field Engineer, retired on July 1, after 37 years of service.

Schweickhard von Goeler, a Principal Research Physicist, retired on June 1, after 34 years of service.

In Memory

We are saddened by the loss of the following retired employees: Joseph Baker, who died on May 26; John R. Clarke, who died on March 22; J. Dale Herron, who died on May 25; and John Q. Lawson, who died on June 13.

PPPL'ers Come Together for Employee Lunch

The Laboratory Sponsors BBQ for Staff on July 1 in the Courtyard

