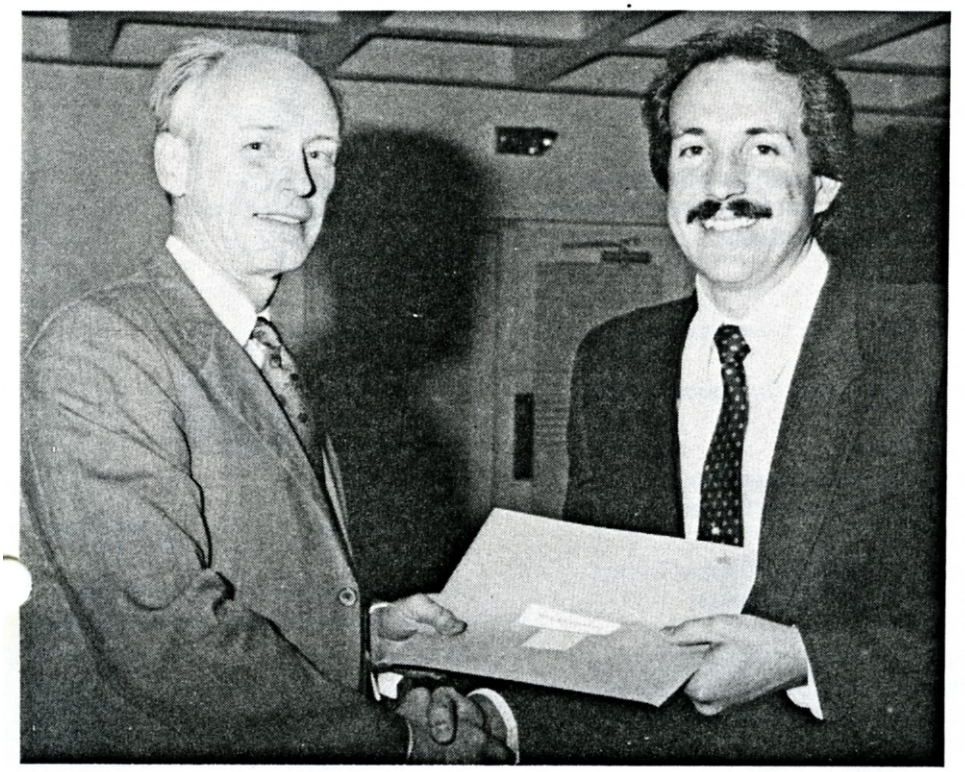
PPPL
PRINCETON
PLASMA PHYSICS
LABORATORY

HOTLINE

Volume 11, No. 14 May 29, 1990

Inventors Honored



(Photo: John Peoples)

Tip Brolin, Acting Director of PPPL, presents Mike Vocaturo with a patent award.

by Carol Phillips

Thirty-nine PPPL inventors were honored at the ninth annual PPPL Patent Awareness Program recognition dinner on April 30 at Prospect House. The Committee on Inventions hosted the dinner for the inventors and their guests as part of the PPPL Patent Awareness Program which was established in 1981 to foster the disclosure of inventions, to recognize creative inventors, and to raise the patent-mindedness of Laboratory staff. Twenty-one invention disclosures were made, two patent applications were filed, and one statutory invention registration was issued in fiscal year 1989.

The Committee on Inventions, chaired by John Johnson and consisting of members Peter Bonanos, Richard Rossi, Charles Staloff, Schweickhard von Goeler, and Marilyn Hondorp, and Joseph File, Head of the Office of Technology Transfer serving *ex officio*, makes cash awards to inventors for their novel ideas — $100 per inventor listed on an invention disclosure (with a maximum of $300 per disclosure shared among inventors if there are four or more). Additional monies — $200 per inventor — are awarded when the Department of Energy files a patent application on the invention. In fiscal year 1989, PPPL inventors were awarded over $4000. Over $60,000 has been awarded since the program began.

At the ceremony, Chairperson John Johnson spoke of the desirability of filing invention disclosures and acknowledged the continuing strong support the Committee and inventors received from Laboratory management, Princeton University, and the Department of Energy. He pointed out that "good ideas can come back to help us in our old age," as with the invention "Toroidal Reactor," by John Dawson, Harold Furth, and Fred Tenney which

Continued on Page 2

HOTLINE is Back!

Thanks to your interest, *HOTLINE* is returning! But we need your help. Do you know of a good story idea? How about classified ads — for sale, rent or to give away — we've saved a place for your notice. We're anxious to fill this newsletter with information about employees, activities and upcoming events.

Ellen Webster is our new writer, and you may see her around asking questions and taking pictures. Smile!

Give Carol Phillips a call at ext. 2754 with suggestions.

. . . We're waiting!

Continued from Page 1

received Statutory Invention Registration status in fiscal year 1989. "Its basic idea is why the TFTR works," he said.

Department of Energy Area Office Head, Milt Johnson expressed gratification to the inventors for their dedication in continuing to make time to "take part in the creative process" in the face of budget cuts and increased workloads. He said, "It reflects your desire for continual improvement and for doing things better."

Tip Brolin, Acting Director and Deputy Director for Technical Operations commented on the opportunities that exist for PPPL inventors to receive cash payments and shares in royalties from licensing an invention to commercial interests. He then presented Certificates of Recognition to the following.

Statutory Invention Registration in Fiscal Year 1989

Toroidal Reactor
J. Dawson
H. Furth
F. Tenney

Patents Applied for in Fiscal Year 1989

Hydrogen Isotope Separation Utilizing Bulk Getters
R. Knize
J. Cecchi

Method of Sustaining a Radial Electric Field and Poloidal Plasma Rotation Over Most of the Cross Section of a Tokamak
M. Ono
D. Darrow

Inventions Disclosed in Fiscal Year 1989

Four-channel ZnS Scintillator Detector for Escaping Charged Fusion Products
S. Zweben

Method of Measuring the DC Electric Field and Other Tokamak Parameters
N. Fisch
A. Kritz

Long Wavelength Phase Conjugation Using Weakly Ionized Plasma as Nonlinear Medium
J. Federici
E. Valeo

Composite Rail Gap Laser
L. Meixler

Hydrostat 10
H. Swiderski
D. West
J. Swatkoski

An Optically Pumped CH_3OH Laser with a Stark-Tuning Capability and with a Fluid-Cooled Cavity
D. Mansfield
M. Vocaturo
L. Guttadora

Method of Constructing Very Large, Multidimensional Arrays of Sensing Devices
A. Janos
R. LaBaw
F. Wood

SPARK Version 1.1
D. Weissenburger

Method of Measuring the Momentum, Energy, Power, and Power Density Profile of Intense Particle Beams
G. Gammel
H. Kugel

ECH Drive X-ray Lithography Source
P. Colestock

Apprentice System for Plasma Physics Theory
H. Mynick

Ultra-Fast Probe Measurements in High-Temperature Plasmas
A. Janos

Amplitude and Phase Control System for High Power RF Sources
G. Cutsogeorge

Proposal to Measure Poloidal Field of a Tokamak via Energetic Neutral Helium Atoms Injected by a Neutral Beam Injector
F.C. Jobes

A D-He^3 Fusion Reactor Based on Dipole Magnetic Field
A. Hasegawa
L. Chen

Evaporatively Cooled Pumped Limiter
P. LaMarche

Improved ECR Microwave Plasma Source
J. Stevens
J. Cecchi
P. Colestock

Laser and Electron Beam Produced White Carbon
J. Timberlake

Combined Soft X-ray Holographic and Reflection Imaging Microscope for Lithographic Inspection
S. Suckewer
C. Skinner
R. Rosser

High Density Control Multiplexer/ Demultiplexer
G. Greene

Carrier for Bridgeport Milling Machine
E. DuBois

The HOTLINE offers congratulations to the following employees:

BIRTHS

A son, Charles Louis, was born to **Charles Neumeyer** (of CIT) and his wife Leslie on March 20.

A son, Nicholas John, was born to **Joe Greco** (of the Safety Department) and his wife Jean on March 21.

A son, Philip Thomas, was born to **Karen Heinemann Kerek** (of the Maintenance Department) and her husband Philip on April 5.

A son, Shawn, was born to **Ed Simmons** (of the RF Section) and his wife Lisa on April 12.

A son, Sean Martin, was born to **Steve Cowley** (of the Theory Division) and his wife Margaret on April 21.

A son, Benjamin Henry, was born to **Cynthia Kieras Phillips** (of TFTR Physics) and her husband Michael on May 3.

A daughter, Courtney, was born to **Bob Kaita** (of PBX) and his wife Chiu-Tze on May 5.

A son, Benjamin Aaron, was born to **Nat Fisch** (of the Theory Division) and his wife Tobe on May 18.

MARRIAGES

Kelliann Glasson (of the Budget Department) and Jeffrey Potts were married on May 5.

RETIREMENTS

Jack A. Bartow retired April 1 after 30 years of service. He was a Project Engineer in the Technical Operations Department.

Richard A. Carlese retired on May 1 after 21 years of service. He was a Technical Associate in the Administrative Operations Department.

Elsie G. Ferreras retired April 1 after 18 1/2 years of service. She was a Word Processor in the Technical Operations Department.

Helen J. Glover retired April 1 after 12-1/2 years of service. She was a Staff Assistant in the Administration Department.

Kristofer P. Mann retired on April 1 after 32 years of service. He was a Technical Associate in the Technical Operations Department.

Henry Mikulewicz retired April 1 after 21 years of service. He was Technical Associate in the Technical Operations Department.

Henry Miller retired on March 2 after 31 years of service. He was the Manager of Transportation Services in the Administration Department.

Chester V. Ptak retired on April 1 after 10 years of service. He was a Cryogenic Engineer in the Technical Operations Department.

Joseph Solivoda retired on May 1 after 26 years of service. He was a Senior Vacuum Technician in the Technical Operations Department.

Leo Ulatowski retired on May 1 after 10 years of service. He was a Technical Associate in the Technical Operations Department.

(Photo: John Peoples)

Rod Templon and Skip Schoen with recent CPCM achievment award.

The Pride of Procurement

by Ellen Webster

Why would two busy men from the Procurement Department willingly study six to eight hours on their own time and then take a three-hour essay exam if they weren't required to do so?

According to Rod Templon, Manager of Subcontracts, and Skip Schoen, now working in the TFTR Planning & Control Office, the incentive to successfully complete the Certified Professional Contracts Manager (CPCM) exam and become certified in their field had to do with both personal and professional motivation.

Templon said that this award indicates that they have achieved a certain level of technical proficiency. It also provides them with a status among their peers because the certification is not easily attained. Additionally it is a positive sign to the Department of Energy that their job knowledge goes far beyond the norm.

Roger Gould, Head of Procurement applauded their accomplishments and said, "Rod and Skip should be congratulated for their independent efforts to make significant contributions to the Procurement Division."

Templon said that continuing to take courses and stay on top of what is happening within one's field is a good way to "develop portable skills — ones that belong to the individual and can't be taken away."

The CPCM exam is administered by the National Contract Management Association which has a national membership of 25,000; only about 4,000 of whom are certified. In addition to the written exam, certification requires that a candidate hold a bachelor's degree, complete eight courses in procurement or in procurement-related areas and have a minimum of two years of contracting experience.

Templon explained contract management as "the process of soliciting, placing, and administering contracts for goods and services." At PPPL this translates to everything from cafeteria management contracts and radio-frequency switch gears to computer maintenance service — even supplying the tiles which line the interior of the TFTR.

In addition to Templon and Schoen, Larry Sutter is also CPCM certified, and has been since 1977.

Fusion for My Generation

by Carol Phillips

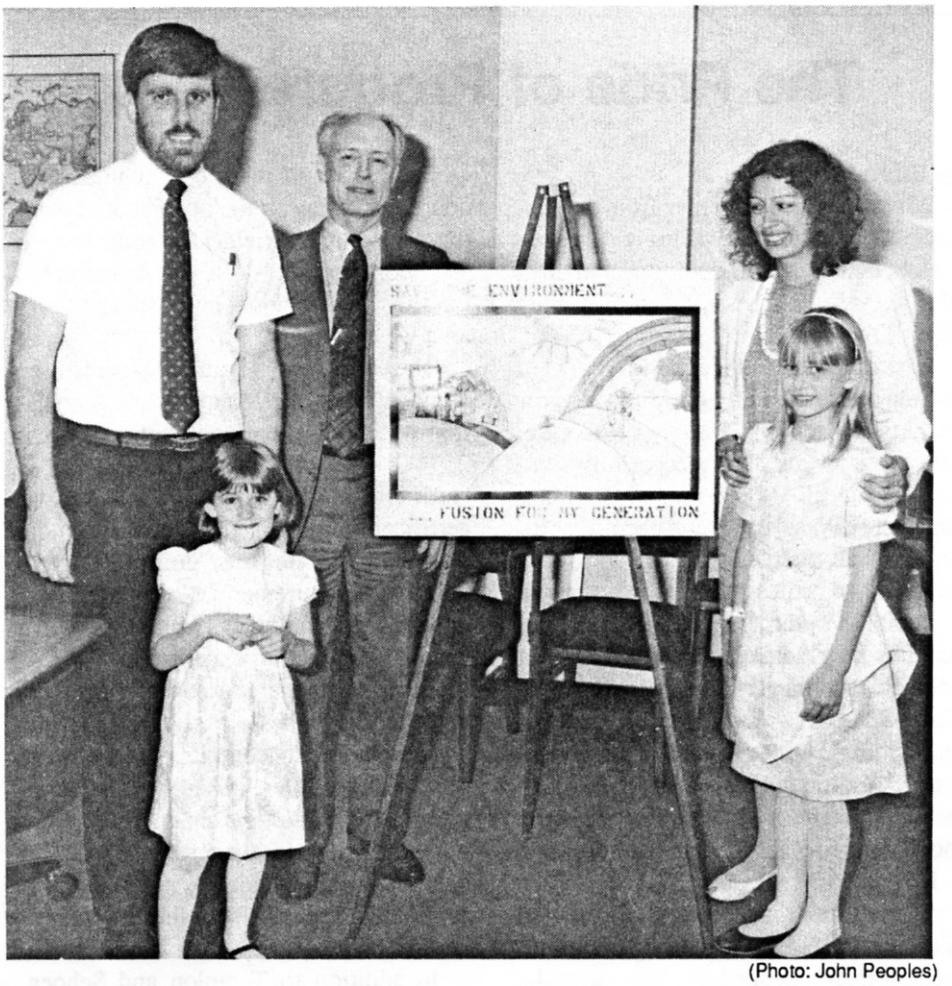
Christine Williams, eight-year-old daughter of TFTR Heating Systems Division Head Mike Williams, was recently named a first-prize winner in the U.S. Department of Energy's Earth Day Poster Contest. Her poster, depicting fusion energy as a clean energy source for "my generation," was part of DOE's Earth Day exhibit at the Mall in Washington, D.C. She received a $100 savings bond, a *Webster's New World Atlas*, a Certificate of Merit, and a personal letter of accommodation from Secretary of Energy James D. Watkins.

Tip Brolin, PPPL's Acting Director, presented Christine her awards at a ceremony at the Laboratory. He told her, "We are very proud of you and how you presented a future we are all working for."

Christine spent a lot of time "talking with Daddy about fusion" before she decided on a theme for the poster. "I knew I wanted to use the Simpson cartoon characters because lots of people like them," she said. It took Christine about two weeks to complete the project. "Drawing the Simpsons was the hardest part," she added.

Christine is a third grader at University Heights Elementary school in Hamilton Square where she participates in the gifted and talented program. Besides drawing awarding winning posters (she was a PPPL Safety Poster Contest winner last year), Christine is involved in gymnastics, dance class, ice skating, and Brownies. She would like to be a teacher.

You can see Christine's winning poster in the LOB Lobby.



(Photo: John Peoples)

Christine Williams' poster about fusion won first prize in DOE's Earth Day Poster Contest. Tip Brolin, Acting Director of PPPL (third from left), presented Christine (front, right) with her awards. Her mother, Sue, sister, Michelle, and father, Mike, joined in the special ceremony.

What's Doing at PPPL?

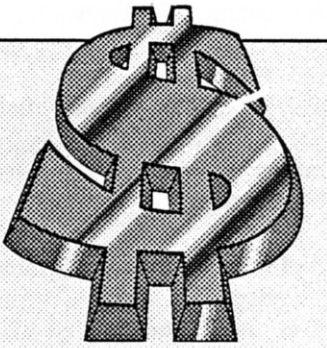
Travelling Display to Visit Princeton

The USDOE Travelling Display of R&D Magazine's Award-Winning Technologies will be exhibited in the PPPL lobby from May 29th to June 15.

A highlight among this year's winners is PPPL's Composite Optical X-Ray Laser Microscope (COXRALM) which will be featured in the display.

Each year 100 prestigious awards are presented by *R&D* magazine to recognize technological accomplishments of laboratories around the country.

PPPL was also a winner in 1987 for the development of an X-Rray laser which operates at a wavelength of 18.2 nanometers in the soft X-Ray regions of the electromagnetic spectrum. The COXRALM is an application of the original invention and combines an inverted phase-contrast optical microscope with a soft X-Ray laser microscope. Both achievements are the result of several years of research by the PPPL X-Rray Laser Group under the direction of Professor Szymon Suckewer.



For Sale

General Electric **VHS Video Camcorder**, Model 1CVM6060E. Includes: Camcorder, 2-hour battery, charging unit, cables, and carrying case. Excellent condition. $550. Call Tony, ext. 2755.

Metal Desk with return—$50; **Ski Boots**, women's size 7 1/2—$75; **Mag Wheels** (2) '84 Daytona—$150. Call Marilyn, ext. 2656.

A Glimpse of the Future: PPPL SEER Awards

by Ellen Webster

Last year the emphasis of the project was geothermal energy. This year thermonuclear laser fission was explored. Next year fusion will be examined, and finally, using the data collected over the three-year period, a comparison of these energy sources will be conducted.

Does this sound like a major undertaking of the DOE? A wide-sweeping project of a major university? Perhaps postdoctoral research of an ambitious scholar?

It is none of these, but rather the result of curiosity and initiative on the part of Daniel Weitz, a sixth grader from Morristown, who is one of this year's PPPL winners in the Student Exposition of Energy Resources (SEER) education project.

Another winner, fourteen-year-old Rebecca McCarthy, conducted an energy survey as part of her project on nuclear engines. She questioned approximately 75 classmates and teachers in order to determine their level of comfort with fusion and fission. When asked which type of power they had more overall confidence in, 80% of those surveyed said fusion.

SEER, now in its eleventh year, is sponsored by the National Energy Foundation's New Jersey Chapter. This annual contest challenges the imagination and creativity of youths from across the state who compete for cash prizes from SEER and recognition from individual organization and companies such as PPPL.

"Kids come up with ideas that adults just don't think of."

John Bradish

On Friday, May 18, these students and their guests visited the Laboratory. David Ciotti conducted a tour and Mary Ann Brown, coordinator of the PPPL awards, hosted a luncheon in their honor. Jack Joyce welcomed the students and thanked them for their interest in science. He applauded them for "acquainting themselves with the information" that was necessary to design their individual projects.

(Photo: John Peoples)

Mary Ann Brown, Patrick McGeachen, Daniel Weitz, Tom Garatina, Andrew Weekley, Becky McCarthy, Josh Wade, Charles Anchor and John Bradish.

John Bradish, formerly of PPPL and now with Princeton University, was a judge at this year's competition and has had a long association with the program. He said that because of raw imagination and ingenuity "kids come up with ideas that adults just don't think of." This is evident, he said, by the range and complexity of their projects as well as their approach to problem-solving.

This year's student PPPL SEER winners and their projects are: Andrew Weekley and Jeff Snyder, eighth graders from Franklin — Nuclear Waste Storage; Daniel Weitz, a sixth grader from Morristown — Thermonuclear Laser Fission; Joshua P. Wade, an eighth grader from Freehold — Chain Reaction Nuclear Fission; Patrick McGeachen, son of Tom McGeachen from the Administration Department — Fusion; Tom Garatina a fourth grader from Port Murray — How to Make Electricity with Piezoelectric Plastic; Rebecca McCarthy and Brie Kolan, eighth graders from Franklin — Nuclear Engines; Robert McLaughlin, a high school student from Forked River — Fiber Optics Video Communications; Robert Egenolf, an eighth grader from Freehold — Cold Fusion; Lisa Cruz a sixth grader from Manaloapan — Atoms and Their Isotopes; and Christopher DiPierro, an eighth grader from Freehold — More Efficient Electricity.

This year's judging panel consisted of: John Bradish; Mary Ann Brown, Engineering Department Secretary; Martin Brown, retired from Bell Laboratories; Charles Anchor, an Electrical Engineer at PPPL; and Dr. Joseph File, Head of the PPPL Technology Transfer Office.

HOTLINE

Editor:	Carol Phillips
Writer & Layout:	Ellen Webster
Photography:	John Peoples
Reproduction:	Teri Daynorowicz
	Dan Klinger

Our best ideas for HOTLINE come from you. If you have a story idea, call Carol Phillips at ext. 2754.

Come One! Come All!

On June 2, from noon to 4:00 p.m., the PPPL grounds will be transformed into a festival for families for this year's employee picnic.

Are you partial to the Mid-way? If so, you can look forward to the Clown Toss, Ball Bingo and earn prizes for your skills.

Prefer a little gamble? Stroll over to the Casino Royale and try your hand at Blackjack, Roulette and the Big Six Wheel. At the end of the day redeem your winning chips for raffle tickets and take home the grand prize!

Maybe brute strength is more your fancy. You'll have a chance to test your brawn at the Speed Pitch and Bell Ringer.

The day will be professionally organized and catered by American Family Day, a company who's sole business is to conduct picnics.

All Laboratory employees, their spouse or guest, and dependent children under 21 are invited. Tickets can still be purchased from: Mary Ann Brown, LOB, Room B354, C-Site, ext. 3045; Rich Cargill, Materiel Control Module, C-Site, ext. 3573; Sue Murphy, CICADA, C-Site, ext. 3264; Jeanne Salerno, 307 College Road, Room 121A, ext. 3003; and Jim Taylor, L-Wing, Room L212, C-Site, ext. 2565. Ticket prices are adults—$5 and children ages 4-12—$2. If you have more questions, contact Bobbie Forcier at ext. 2101 or Steve Iverson at ext. 2007.

Good Work, Bob Verney . . .

RECEIVED FEB 2 8 1990

PLAINSBORO TOWNSHIP POLICE

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PLAINSBORO, NEW JERSEY 08536-0278
(609) 799-2333

ATTACHMENT D.M. 90-08

CLIFFORD J. MAURER
CHIEF OF POLICE

February 22, 1990

Mr. Alan Guyet
Director of Public Safety
Princeton University, Forrestal Campus
Princeton, New Jersey 08540

Dear Mr. ~~Guyet:~~ Al

On Tuesday, February 13, 1990 at 1853 hours, there was a serious motor vehicle accident on Mapleton Road, Plainsboro Township, in which an automobile struck a utility pole. The resulting power failure caused an alarm to be sent to your office from the water monitoring station near the accident scene. Officer Bob Verney, from your security staff, responded to the scene to check on the cause of the alarm.

Upon his arrival, he discovered the accident scene, where a Plainsboro Officer was already present, and attending to an injured person. Officer Verney immediately offered his assistance and assumed a position for traffic control, as requested, until additional Plainsboro Officers arrived. Sgt. Furda of this Department, has advised me that Officer Verney was very professional in his demeanor, and he provided invaluable assistance to the officers at the scene of this accident.

I would like to take this opportunity to thank Officer Verney for providing his professional assistance. His conduct was a very positive reflection of your department. He is continuing a tradition that we have come to expect from your department, but we do not take for granted. Thanks to your department and Officer Verney.

Sincerely,

Captain Timothy L. Matheny

TLM:acc

An Accredited Law Enforcement Agency

Congratulations to Bob Verney for taking the initiative to offer his help and expertise in a recent auto accident. Bob is an Emergency Services Officer with the Emergency Preparedness Division and Public Safety.

Have a bright idea?
Send it to HOTLINE!
Interoffice correspondence:
Room B366
James Forrestal Campus, C-Site
or call Carol at ext. 2754