



HOTLINE

PRINCETON PLASMA PHYSICS LABORATORY

Vol. 8, No. 7

January 13, 1987

EMPLOYEE DEVELOPMENT PROGRAM COURSES TO START IN FEBRUARY

In response to a recommendation of the Laboratory's Follow-Up Task Force to the Opinion Research Corporation employee survey conducted here last summer, Director Harold Furth has approved the offering of a dozen training and developmental courses by the Laboratory to PPPL employees starting next month.

"The specific courses, to be announced in the next two weeks, are part of the PPPL Employee Development Program and will be offered on site for the benefit of both employees and the Laboratory," according to Jim Clark, Deputy Director for Administrative Operations and Chairman of the Follow-Up Task Force. "They are designed to help employees achieve job and career objectives by providing a way for them to strengthen their skills and knowledge and to enable PPPL to respond better to the programmatic and technological challenges that face us," he explained.

A brochure will be mailed to all employees later this month identifying the courses offered in the winter-spring period. The brochure will provide brief descriptions of the courses, the days and times the courses will be offered,

and other information about enrollment. Textbooks and other instructional material needed for the classes will be provided. The courses will be taught by faculty from area colleges as well as qualified PPPL instructors.

"This will be a pilot effort to determine employee interest and gain experience in this area," according to Charlie Staloff who is leading the efforts of the panel on Job Training and Career Development. "We are planning initially to offer 12 courses that address interests expressed by employees and the needs of the Laboratory," Staloff stated. "The final course offerings will depend on enrollment. Generally, to make the investment required to sponsor a course, a minimum enrollment of 16 students will be needed. For some courses, which require access to a computer or involve the use of Laboratory facilities, a smaller enrollment would be permitted."

The courses, which will enhance an employee's skills in present or potential jobs, will be scheduled partly during working hours and partly on employees' personal time. "Whenever possible, they will be scheduled around the lunch

hour and at the end of the work day," Staloff added. "We are sensitive to the possible difficulties that employees can incur when classes extend past normal quitting time."

Those interested in taking a course may begin the registration process by completing an application form which will be included in the brochure. Enrollment will require supervisory recommendations, as well as consideration of the development opportunity for the employee, the equitable distribution of opportunities among groups of employees, and Laboratory needs where these apply.

PPPL BIDS FAREWELL TO PLT

Present and former staff of the Princeton Large Torus (PLT) machine gathered in the device's control room Tuesday, December 23, 1986 to mark the close of operations of one of the world's longest running and most prolific magnetic fusion devices. Last plasma came at 11:07 a.m., 11 years and 3-1/2 days after start-up at 12:45 a.m., December 20, 1975. Only one other fusion device, the TFR at Fontenay-aux-Roses, near Paris, has operated longer.

(continued)



PPPL staff watch the countdown to the last PLT plasma on December 23.

During its lifetime, PLT established a number of world-record plasma parameters. Many staff will remember the "PLT weekend" in August of 1978 when the machine made headlines all over the world for its attainment of 65 million °C ion temperatures. In 1980, PLT exceeded this record by reaching 80 million °C. Both records were established using neutral-beam injection heating.

For the last four years, PLT has been used primarily for studies of radio-frequency heating and current drive. The machine has helped establish the efficacy of ion-cyclotron-resonance heating and has demonstrated the potential of lower-hybrid radio-frequency waves as a means of driving plasma current. The latter opens the possibility of steady-state tokamak operation, a requirement for sustained ignition in an Engineering Test Reactor.

Don Grove led the 3-1/2 year, \$14 million PLT design and construction project and served as head of the PLT section of the Experimental Division. He was followed by Wolfgang Stodiek, Joel Hosea and, most recently, Stefano Bernabei.

NEW LOCATION



The Information and Administrative Services Branch, including the NBI Network and the Reports and Patents Office, was relocated to the third floor of the LOB during

December. Check with the PPPL receptionist for individual room locations and new telephone extensions.

Travel Services has been temporarily relocated to the first floor of the LOB, room B-173. The telephone number remains the same, ext. 2658.

JANUARY SPEAKERS

Colloquiums

A series of colloquiums are given each year from September to June. They are held on Wednesday at 4:15 p.m. in the MBG Auditorium, unless otherwise noted. The January colloquiums include:

"Pattern Recognition and Machine Learning," by Nat Fisch, PPPL, 21 January.

"Short Wavelength Lasers," by Peter Hagelstein, Massachusetts Institute of Technology, 28 January.

SOSSO Seminars

The Secretarial and Office Support Staff Organization hosts a number of seminars during the year for the secretarial and office support staffs.

The January seminar, entitled "Benefits for the Bi-Weekly Staff," will be presented on Thursday, January 22, from 11:30 to 12:30 in the MBG Auditorium. The speakers will be Ms. J. Doig and Ms. N. Feldman from the Princeton University Personnel Department.

NONDESTRUCTIVE EXAMINATION CERTIFICATION COURSE

One dozen "students" have completed the first session of a new in-house training course on nondestructive weld testing developed through the PPPL Quality Assurance Branch.

The inclusion of tritium systems on TFTR, as well as the possibility of siting CIT at PPPL, prompted Dick Reny of the Quality Assurance Branch's Quality Control (QC) Department to plan the welding inspection course. The course will be instrumental in developing a group of PPPL-certified Level II inspectors in compliance with the American Society for Nondestructive Testing standard TC-1A.

The course also plays a crucial part in establishing baseline criteria for acceptable quality welds by setting acceptance and rejection limits. The training will enable QC inspectors to examine welds for compliance with specific codes, standards, and levels of quality.

Welders who take the course become aware of what QC inspectors are looking for when they make their inspections, and can monitor their own work accordingly. Although PPPL is a "custom shop," and is therefore exempted from some industrial codes, the course helps sharpen each welder's conformity to applicable standards.

Twelve employees drawn from various laboratory shops and Quality Assurance took the initial training course. The course provides 12 hours of training in liquid penetrant weld examination and 20 hours of training in visual examination of welds. Both

practical and written examinations were given during the session.

The course is taught by instructors from United Engineering and Construction of Philadelphia. The firm, which conducts similar training courses for utilities, draws most of its teachers from the nuclear industry. Each instructor is very aware of the stringent standards and codes that must be adhered to.

Tom Frolo, a welding engineer at the Seabrook Nuclear Plant, taught PPPL's pilot course. The first portion of the session was devoted to liquid penetrant examination. Students were taught to detect surface defects in welding materials, ensuring the quality of products produced from those materials. Tom reported that his students "did very well" on the liquid penetrant exam.

During the visual examination portion of the course, a general knowledge of welding, materials, and codes was stressed. PPPL samples were used as illustrations, along with slides and photographs supplied by Frolo.

In highlighting the standards observed by industrial welders, Frolo emphasized that PPPL welders do "excellent work," and have accepted the standards "exceptionally well." Results of the visual exam are still being tallied.

Enrollment in future sessions of the welding course is limited to students selected by their supervisors. Supervisors should contact Dick Reny with their recommendations.

A course on mass spectrometer leak testing is slated for early this year.

by Kathy Dunn



"Students" examine certificates awarded for successful completion of the in-house training course on nondestructive weld testing. Standing, left to right: H. Dyer, J. Hicks, R. Borusovic, H. Howard (Quality Assurance and Reliability Division Head), A. Juhasz, W. Little, and R. Reny (course organizer). Seated, left to right: V. Bernhardt, E. Bush, J. Bennett, M. Candelori, R. Shamon. Not shown are J. Hengeli and M. Scott who also completed the course.

SAFETY TRAINING COURSES

The Occupational Medicine and Safety Office has scheduled the following safety training courses for February:

<u>Course</u>	<u>Date/Time/Location</u>
Crane Operator Refresher Course	10 February, 9:00 a.m., Theory Conference Rm
Hearing Conservation	12 February, 9:00 a.m., Safety Training Trailer
Basic Electrical Safety	19 February, 9:00 a.m., Safety Training Trailer
Radiation Safety Training	24-26 February, four hours each day, MBG Auditorium

Basic Safety Orientation for new employees is offered every Monday beginning at 8:30 a.m. in the Safety Training Trailer.

Employees must obtain permission from their immediate supervisor to attend these classes. Supervisors should call Mary Ann McBride at extension 3468 to enroll their employees.

MEETING CALENDAR

February 1987

- 09-11 **16th Plasma Physics Conf**, New South Wales, Australia. Contact: Ms. J. Watson, Conference Secretary, Australian Institute of Nuclear Science and Engineering, Private Mail Bag, P.O. Sutherland, NSW 2232, Australia.
- 14-19 **Annual Meeting of the American Association for the Advancement of Science**, Chicago, Illinois. Contact: R.M. Sinclair, Physics Division, National Science Foundation, Washington, D.C. 20550. 202-357-7997.

March 1987

- 16-19 **1987 Particle Accelerator Conf**, Washington, D.C. Contact: S. Penner, B102 Radiation Physics, Gaithersburg, MD 20899.
- 16-20 **General Meeting of the American Physical Society**, New York, New York. Contact: APS, 335 East 45th Street, New York, NY 10017. 201-251-9250.

More comprehensive meeting listings may be found in Nuclear Fusion, Physics Today, IEEE Spectrum, and Communications of the ACM.

CORRECTION

The recent HOTLINE article on the new government travel rules contained an error. When lodging and meals must be procured at a conference center or hotel, actual subsistence expenses may be claimed. Under no circumstances will reimbursements exceed the sum of the two per diem allowances by more than 50%, not 150% as stated in the article.