

DIRECTIONS

Philip Morris Research Center is situated 6 miles south of Richmond on Interstate 95 (take Exit 8, Bells Road). For parking take Bells Road and use first entrance on the right (Gate C).

Byrd International Airport is 20 minutes from Downtown Richmond and 30 minutes from Philip Morris. Groome Transportation Service is available at a nominal price.

ACCOMMODATIONS*

| | | | Miles from Philip Morris |
|--|--|--|-----------------------------|
| Hyatt House W. Broad St. and I-64 800-228-9000** S-\$34 D-\$44 | | | 12 |
| Ramada Inn South 2126 Willis Rd. 800-228-2828** S-\$18 D-\$23 | | | 5 |
| John Marshall Hotel 5th and Franklin St. 804-644-4661 S-\$25-35 D-\$31-41 | | | 6 |
| Sheraton Motor Inn Belvidere St. & Franklin St. 800-325-3535** S-\$21 D-\$25 | | | 7 |
| Holiday Inn-Downtown 301 W. Franklin St. 800-238-8000** S-\$22 D-\$28 | | | 7 |
| Holiday Inn-Bells Rd. Bells Road and I-95 800-238-8000** S-\$19 D-\$24 | | | ¼ |

*Please mention conference at Philip Morris to ensure the approximate special rates listed.

**Toll free number.

Hotels rooms are in short supply in Richmond — early booking recommended.

**IMPI COURSE
ON
INDUSTRIAL, SCIENTIFIC
AND MEDICAL USES
OF MICROWAVES**

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we would like to attend if possible Bob

**Industrial, Scientific
and
Medical Uses
Of Microwaves**

**Wednesday, March 28, 1979
9:00 AM to 4:00 PM**

at

THE PHILIP MORRIS
RESEARCH CENTER
4201 Commerce Road
Richmond, Virginia 23261

Sponsored by
The International Microwave
Power Institute
(IMPI)
Box 634

Sub 11 University of Alberta
Edmonton, Canada T6G 2E0

REGISTRATION FORM

**INDUSTRIAL, SCIENTIFIC AND MEDICAL
USES OF MICROWAVES**

Name _____

Title _____

Affiliation _____

Address _____

City _____ State _____ Zip _____

| REGISTRATION FEE | AMOUNT ENCLOSED |
|---|--------------------|
| IMPI Members | \$50 _____ |
| Non-members | \$75 _____ |
| Student | \$25 _____ |
| Add \$15 late registration fee if application received after February 15, 1979. | _____ |
| Total | _____ |

Make check payable to: —

“IMPI SHORT COURSE”

Mail this form and check or money order to: —

A. C. Lilly
Philip Morris Research Center
P.O. Box 26583
Richmond, Va. 23261
Tel. 804-271-5681

Confirmation will be sent upon receipt of registration. Registration limited to first 150.

Afternoon session to be attended. Please mark one only.

INDUSTRIAL MEDICAL FOOD TECHNOLOGY

**INDUSTRIAL, SCIENTIFIC AND MEDICAL
USES OF MICROWAVES**

Wednesday, March 28, 1979 9:00 AM - 4:00 PM
at Philip Morris Research Center
4201 Commerce Road
Richmond, Virginia

- 8:00 AM Registration — coffee
- 9:00 AM Welcome
Dr. R. B. Seligman, Vice President, Research and Development, Philip Morris, U.S.A.
- 9:10 AM Introduction
Dr. T. S. Laszlo, IMPI Symposium Director
- 9:30 AM MICROWAVE HEATING THEORY
Dr. W. R. Tinga, Associate Professor of Electrical Engineering, University of Alberta, Edmonton, Canada

Emphasis will be placed on internal microwave heat generation, microwave interactions with materials, and the behavior of propagating and applicator systems.
- 10:30 AM Coffee Break
- 10:45 AM MICROWAVE TECHNIQUES
Bernard Krieger, Vice-President, Cober Electronics, Inc., Stamford, Ct.

Discussion of how microwaves are generated, conveyed and applied to the product along with instruments, protective features and controls that give the user information on the results and on the state of the equipment.
- 11:45 AM BIOLOGICAL EFFECTS OF MICROWAVES
Dr. S. F. Cleary, Professor of Biophysics, Medical College of Virginia, Richmond, Virginia.

The status of research on the biological effects of microwave radiation will be presented. The known mechanisms of interaction of microwaves with biological systems will be described and related to exposure effects.

- 12:45 PM Overview of the Philip Morris Research Center, A. C. Lilly, Associate Principal Scientist, Philip Morris U.S.A.
- 1:00 PM Lunch, Philip Morris Cafeteria
- 1:40 PM Guided tours of Philip Morris Research Center.
- 2:15 PM THREE PARALLEL SESSIONS
 - A. INDUSTRIAL APPLICATIONS OF MICROWAVES
Dr. T. S. Laszlo, IMPI Symposium Director

The use of microwave technology in the chemical and mechanical industries as well as in analytical and preparative processes.
 - B. MICROWAVES IN MEDICINE
Dr. D. R. Justesen, Director of Neuropsychology and Behavioral Radiology Laboratories, VA Medical Center, Kansas City, Mo.

Medical applications of radio frequency radiation is discussed in relation to recent technological and scientific advances.
 - C. MICROWAVE FOOD PREPARATION
Dr. R. F. Schiffman, R. F. Schiffmann Associates, New York, N.Y.

The unusual heating method of microwaves demands new food product development techniques to obtain satisfactory product quality.
- 3:25 PM Coffee Break
- 3:40 PM Closing Remarks
A. C. Lilly, Associate Principal Scientist, Philip Morris U.S.A.

COURSE DESCRIPTION — This course is intended to present the state of microwave theory, its application in fields of industry, analysis and medicine. The very important controversial question of microwave health effects and safety will be given special consideration.

The presentation will provide useful information to physical and medical scientists, engineers and technicians.

COURSE CO-CHAIRMEN —
Dr. T. S. Laszlo, IMPI Symposium Director
A. C. Lilly, Associate Principal Scientist, Philip Morris U.S.A.

PHILIP MORRIS ORGANIZING COMMITTEE —
Dr. J. Banyasz Dr. P. Martin W. A. Nichols
Dr. P. A. Eichorn T. A. Newman E. B. Stultz