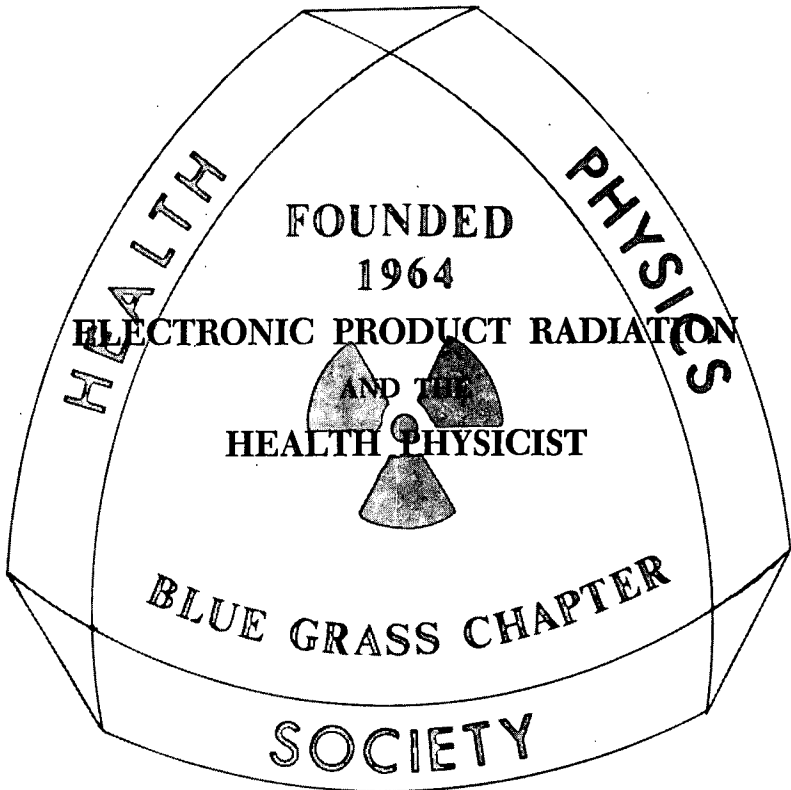


Glaser

FOURTH ANNUAL MIDYEAR TOPICAL SYMPOSIUM

HEALTH PHYSICS SOCIETY



BROWN HOTEL - LOUISVILLE, KENTUCKY
JANUARY 28 - 30, 1970

Sponsored by

**The Blue Grass Chapter
Health Physics Society
Charles M. Hardin, President**

and

**Bureau of Radiological Health
Environmental Control Administration
Department of Health, Education and Welfare**

NOTES

Proceedings will be published and made available by the
Bureau of Radiological Health

All technical sessions will be held in the Crystal Ballroom

PURPOSE

To focus on the problems of electronic product radiations
in context with the enactment of Public Law 90-602.

GENERAL INFORMATION

Location

The Fourth Annual Health Physics Society Midyear Topical Symposium will be held in the Brown Hotel, 4th and Broadway, Louisville, Ky. For persons arriving at Standiford Field Airport, the Brown Hotel is approximately a 10-15 minute ride by taxi or limousine. Free parking for Hotel guest is provided for those who arrive by automobile. Hotel room rates are \$10.00 (single) and \$15.00 (double) for those attending the Symposium.

Advance Registration

You are urged to register in advance, if possible, by sending pre-registration forms to Professional Associates, Inc., 6710 Clayton Road, St. Louis, Missouri, 63117. This will simplify procedures involved in registration and in making tour arrangements.

Registration

Place — Mezzanine Floor

| | |
|-----------------------|-----------------------|
| Time — Tuesday | 9:00 a.m. - 5:00 p.m. |
| | 7:00 p.m. - 9:00 p.m. |
| Wednesday | 8:30 a.m. - 5:30 p.m. |
| Thursday | 8:30 a.m. - 5:30 p.m. |

Registration Fees

Members and non-members - \$20.00
(Includes reception, banquet and gratuities and published proceedings)
Students - \$2.00 (does not include reception, banquet etc.)
Reception and banquet only - \$10.00

Reception and Banquet

Thursday, January 29 —
6:00 p.m. to 7:30 p.m. — Reception
7:30 p.m. — Banquet and Speaker

TOURS

Tuesday, January 27

Fort Knox, US Army Armor Center — will include a tour through the US Army Medical Research Laboratory, Patton Museum (war trophies, including those captured by General George S. Patton during World War II) and an **outside** view of the Gold Bullion Depository.

NO CHARGE

Limit — 45 people

Bus leaves Brown Hotel 12:30 p.m., returns 4:30 p.m.

Information regarding other tours through areas of interest in Louisville can be obtained at the Ladies' Hospitality Room.

LADIES' PROGRAM

Ladies' Hospitality Room — will be open daily Tuesday through Thursday from 9:00 a.m. to 5:00 p.m.; Friday 9:00 a.m. to 12:00 p.m. Coffee and rolls 9:00 a.m. - 10 a.m. daily.

TUESDAY, January 27

12:30 p.m. - 4:30 p.m.

Fort Knox Trip (see tours)

WEDNESDAY, January 28

10:30 a.m. - 3:30 p.m.

Tour of historic Louisville — will include tours through Locust Grove (home of George Rogers Clark) and Brown-Forman Distillery and a smorgasbord lunch at the Continental Inn.

\$10.00 per person — bus leaves Brown Hotel

THURSDAY, January 29

“Free Time” Day — contact hostess for suggested activities.

**WEDNESDAY MORNING, JANUARY 28
CRYSTAL BALLROOM**

9:00 Welcome

9:15 Keynote Address

John C. Villforth, Director
Bureau of Radiological Health
Department of Health, Education and Welfare
Rockville, Maryland

**SESSION I - NEW SCOPE FOR HEALTH PHYSICS
INVITED PAPERS**

Chairman: John C. Villforth

9:30 A — Energy Pollution of the Environment

K. Z. Morgan, Director
Health Physics Division
Oak Ridge National Laboratory
Oak Ridge, Tennessee

10:15 — Visit Exhibits - Refreshments

**10:45 B — The Impact of the Electronic Product Radiation
Control Program (P.L. 90-602)**

Robert L. Elder, Acting Director
Division of Electronic Products
Bureau of Radiological Health
Department of Health, Education and Welfare
Rockville, Maryland

**11:30 C — Educational Needs to Implement New Responsi-
bilities in Radiation Safety**

J. Newell Stannard
(President, Health Physics Society)
Associate Dean for Graduate Studies
University of Rochester
Medical Center
Rochester, New York

12:15 — Discussion

**WEDNESDAY AFTERNOON, JANUARY 28
CRYSTAL BALLROOM**

**SESSION II - MICROWAVE AND X-RAY
CONTRIBUTED PAPERS (Continued)**

Chairman: E. Dale Trout, Professor
X-Ray Science and
Engineering Laboratory
Oregon State University
Corvallis, Oregon

- 2:00 W1 — National Inventory of Electronic Products**
Jesse V. Harris
Division of Biological Effects
Bureau of Radiological Health
Department of Health, Education and Welfare
Rockville, Maryland
- 2:15 W2 — Present International Microwave Exposure Limits**
Vernon E. Rose
Bureau of Occupational Safety and Health
Department of Health, Education and Welfare
Cincinnati, Ohio

Charles H. Powell
Environmental Health Center
University of Missouri
Columbia, Missouri

Jon R. Swanson
International Labour Office
Geneva, Switzerland
- 2:30 W3 — "Microwave Cataracts" - Case Report Re-Evaluated**
Fred G. Hirsch
Lovelace Foundation for Medical Education
and Research
Albuquerque, New Mexico
- 2:45 W4 — The Dipole/Slot Radiation Pattern and Its Use in Understanding Both Microwave Leakage and Survey Techniques**
C. B. Nelson, R. G. Underwood and G. I. Coats
Northeastern Radiological Health
Laboratory
Winchester, Massachusetts

**WEDNESDAY AFTERNOON, JANUARY 28
CRYSTAL BALLROOM**

**SESSION II - MICROWAVE AND X-RAY
CONTRIBUTED PAPERS**

(Continued)

- 3:00 W5 — Microwave Oven Repair: Hazard Evaluation**
William M. Eden
Department of Health and Rehabilitative
Service
Jacksonville, Florida
- 3:15 W6 — R F Response of Radiation Survey Instruments**
F. J. Bradley and A. Jones
Division of Industrial Hygiene
New York State Department of Labor
New York, New York
- 3:30 — Visit Exhibits - Refreshments**
- 4:00 W7 — X-Radiation Measurement Around High Power
Klystrons**
R. L. Lehman
Laboratory for Nuclear Science
Massachusetts Institute of Technology
Cambridge, Massachusetts
- 4:15 W8 — Radiation Emissions from Demonstration Type
Cold-Cathode Discharge Tubes**
William Properzio
Division of Electronic Products
Bureau of Radiological Health
Department of Health, Education
and Welfare
Rockville, Maryland
- 4:30 W9 — U.L. X-Radiation Requirements for Color TV
Receivers**
Leonard Horn
Underwriter's Laboratories, Inc.
Chicago, Illinois
- 4:45 W10 — Radiation Hazard Assessment of Privately-
Owned Colour Television Receivers in Canada**
A. K. DasGupta and K. Fujimoto
Radiation Protection Division
Department of National Health
and Welfare
Ottawa, Canada

**THURSDAY MORNING, JANUARY 29
CRYSTAL BALLROOM**

**SESSION III - LASER RADIATION
INVITED PAPERS**

Chairman: Charles F. Tedford
CDR, MSC, USN
Radiation Safety Branch
Submarine and Radiation
Division
Department of Navy
Washington, D. C.

9:00 D — Characteristics of Lasers

R. James Rockwell, Jr.
Directing Physicist
Laser Laboratory
Medical Center
University of Cincinnati
Cincinnati, Ohio

9:45 E — Laser Instrumentation and Dosimetry

Richard C. Honey, Director
Electromagnetic Techniques Laboratory
Stanford Research Institute
Menlo Park, California

10:30 — Visit Exhibits - Refreshments

10:45 F — Biological Effects of Laser Energy on the Eye

William T. Ham, Jr.
Chairman, Department of Biophysics
Medical College of Virginia
Richmond, Virginia

11:30 G — Laser Hazard Control Procedures

George M. Wilkening
Head, Industrial Hygiene and
Safety Administration Department
Bell Telephone Laboratories, Inc.
Murray Hill, New Jersey

12:15 — Discussion

**THURSDAY AFTERNOON, JANUARY 29
CRYSTAL BALLROOM**

**SESSION IV - LASER AND ULTRAVIOLET
CONTRIBUTED PAPERS**

Samuel Fine, Chairman

Department of Biophysics
and Biomedical Engineering
Northeastern University
Boston, Massachusetts

2:00 T1 — Interaction of Laser Radiation on the Skin of Man

Leon Goldman, Nazem Abraham and
William Rutti
Laser Laboratory
Medical Center
University of Cincinnati
Cincinnati, Ohio

2:15 T2 — Ocular Hazards of Q-Switched Erbium Lasers

George H. Bresnick, Major, MC
Army Joint Laser Safety Team
Frankford Arsenal
Philadelphia, Pennsylvania

2:30 T3 — Chronic Effects of Low Level He-Ne Laser Irradiation

Arnold I. Goldman, Russell L. Carpenter
and Gerald J. Karches
Northeastern Radiological Health Laboratory
Winchester, Massachusetts

2:45 T4 — Laser Radiation Viewed as a Point or Diffused Source

David H. Sliney
Laser-Microwave Division
US Army Environmental Hygiene Agency
Edgewood Arsenal, Maryland

3:00 T5 — Laser Hazard Evaluation and Calculations Utilized in the Review of Laser Safety Plans and Procedures

Oliver D. T. Lynch, Jr.
Nevada Test Site Support Office
US Atomic Energy Commission
Mercury, Nevada

**THURSDAY AFTERNOON, JANUARY 29
CRYSTAL BALLROOM**

**SESSION IV - LASER AND ULTRAVIOLET (Continued)
CONTRIBUTED PAPERS**

- 3:15 T6 — Army Laser Range Controls**
Benjamin C. Freasier, 1 Lt., MSC
Laser-Microwave Division
US Army Environmental Hygiene Agency
Edgewood Arsenal, Maryland
- 3:30 — Visit Exhibits - Refreshments**
- 4:00 T7 — A Low Power CW Laser Evaluation Field Kit**
R. W. Peterson, H. F. Stewart and
W. F. Van Pelt
Southwestern Radiological Health
Laboratory
Las Vegas, Nevada
- 4:15 T8 — A Safety Oriented Laser Manual for Science Teachers**
W. F. Van Pelt, H. F. Stewart and
R. W. Peterson
Southwestern Radiological Health
Laboratory
Las Vegas, Nevada
- 4:30 T9 — A General Consideration of the Biological Hazards of Occupational Exposure to Ultraviolet Radiation**
John R. Prince
Division of Nuclear Medicine
Kansas City General Hospital and
Medical Center
Kansas City, Missouri
- 4:45 T10 — The Detection of Ultraviolet Light Using the Thermoluminescence of Sapphire**
D. C. Sutherland, W. G. Buckman and
D. W. Cooke
Department of Physics and Astronomy
Western Kentucky University
Bowling Green, Kentucky
- 6:00 — Reception**
- 7:30 — Banquet Speaker**
Dr. J. E. Kupperian, Jr.
Head, Astro Physics Branch
Space Science Laboratory
Goddard Space Flight Center

**FRIDAY MORNING, JANUARY 30
CRYSTAL BALLROOM**

**SESSION V - MICROWAVE AND RF RADIATION
INVITED PAPERS**

Chairman: Russell L. Carpenter
Consultant, U. S. Public Health
Service
Northeastern Radiological Health
Laboratory
Winchester, Massachusetts

- 9:00 H — RF and Microwave Radiation Equipment**
Frank Lamaster
Electronic Compatibility and
Measurements Branch - GEEIA
Griffiss Air Force Base, New York
- 9:45 I — Advances in Instrumentation for Evaluation of
Microwave Hazards**
William A. Palmisano
Chief, Laser-Microwave Division
U. S. Army Environmental Hygiene Agency
Edgewood Arsenal, Maryland
- 10:30 — Visit Exhibits - Refreshments**
- 10:45 J — Interaction of Microwave and RF Energy on
Biological Material**
Lawrence D. Sher, Assistant Professor
Department of Biomedical Electronic
Engineering
University of Pennsylvania
Philadelphia, Pennsylvania
- 11:30 K — Microwave Hazards - Surveillance and Control**
Richard L. Thompson, Manager
Environmental Health
Pan American World Airways
Cape Kennedy, Florida
- 12:15 — Discussion**

**FRIDAY AFTERNOON, JANUARY 30
CRYSTAL BALLROOM**

**SESSION VI - WHERE DO WE GO FROM HERE?
A WRAP-UP DISCUSSION**

Chairman: Emil T. Chanlett, Professor
Department of Environmental
Sciences and Engineering
School of Public Health
University of North Carolina
Chapel Hill, North Carolina

**1:30 — The Ramifications and Implementation of the Broad-
ened Scope (RIBS) of the Health Physics Society's
Interest**

Ad Hoc Committee Report -
J. H. Pingel (Chairman)
W. H. Ham, Jr.
A. F. Klascius
C. R. McHenry
W. A. Mills

Discussants:

J. H. Pingel, Senior Health Physicist
US Atomic Energy Commission
Chicago Operations Office
Argonne, Illinois

E. Dale Trout, Professor
X-Ray Science and Engineering Laboratory
Oregon State University
Corvallis, Oregon

George M. Wilkening, Head
Industrial Hygiene and
Safety Administration Department
Bell Telephone Laboratories, Inc.
Murray Hill, New Jersey

John A. Auxier,
Chief, Dosimetry Section
Health Physics Division
Oak Ridge National Laboratory
Oak Ridge, Tennessee

WHERE TO EAT

Within 3 blocks of Hotel

Dining

English GrillBrown Hotel
Stouffer's Inn (roof)2nd and Broadway
Kunz's (The Dutchman)526 S. 4th St.

Cafeterias

Colonnade (11 a.m. - 2 p.m. only)Starks Bldg.,
4th and Walnut
Blue Boar (11 a.m. - 2 p.m. 4 p.m. - 8 p.m.)644 S.
4th St. and 410 W. Walnut

By car (5-10 minutes)

Casa Grisanti (Italian)1100 Fehr Ave.
Luau (Dobbs House) Standiford Airport
Executive Inn Standiford Airport
Essex House3110 Bardstown Rd.
Hasenour'sBarret at Oak

NOTES

NOTES

Committees for Mid-Year Symposium

Symposium Chairman, Wordie Parr

Operations and Arrangements Committee

*Wordie Parr
Ahren Jacobson
Richard Czerwonka
Dailey McPeak

Technical Program Committee

*Arnold Brownell
Arch Howard
Joseph Sayeg
Sam Hurst
John Auxier
James Kereiakes
Joseph Rosenbaum

Public Relations Committee

*Richard Fry
Dave Clark
Larry Czerwonka
Donald Hopper
James Elliott

Finance Committee

*Tom Banks
Bruce Harris
Don Hughes

Exhibitors Committee

*Barney Roberts
Jim Lambert
Marvin Ackerman
Mike Higgins
Nelson Perry

Tours and Entertainment Committee

*Richard Czerwonka
Ahren Jacobson
Dailey McPeak
Donald Hopper

Sub-Committee (Ladies Program)

*Mrs. Cleta Gardner
Mrs. Wordie Parr
Mrs. Ahren Jacobson
Mrs. Richard Czerwonka

Publications Committee

*James Elliott
Phil Jackson
Joe King
Curt Hopkins

Special Advisor

Charles Willis
(So. Calif. Chapter)

Coordinators:

Charles Hardin
Leonard Wilson

*Committee Chairman