



The general outlines and many of the details of the 5th International Congress on High-Speed Photography, to be held at the Sheraton-Park Hotel, Washington, D.C., October 16-22, have now fallen into place. Complete information about the Congress, including registration forms, will be included in a booklet now in preparation and expected to be available early in August.

U.S. Government Participation

In the words of the U.S. House of Representatives Committee on Foreign Affairs, recommending adoption of a Resolution in support of the Fifth Congress (previously passed unanimously by the Senate and subsequently adopted in similar fashion by the House of Representatives): "The International Congress on High-Speed Photography has received recognition and support from the governments of the respective host countries since the first Congress was held in Washington, D.C. (under the sponsorship of SMPTE) in 1952."

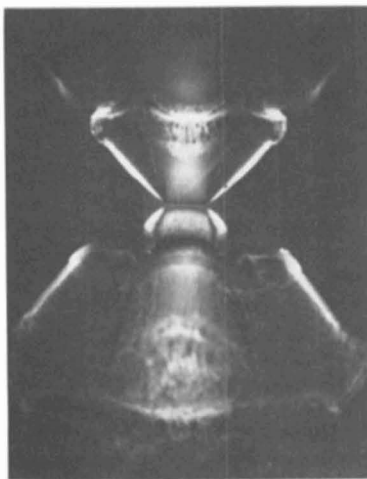
The operative part of the Concurrent Resolution itself, which was introduced into the Senate by Senator Warren Magnuson, Chairman of the Senate Committee on Interstate and Foreign Commerce, states: "That it is the sense of the Congress that all interested agencies of the Federal Government should participate actively to the greatest practicable extent in the Fifth International Congress on High-Speed Photography to be held . . . under the sponsorship of the Society of Motion Picture and Television Engineers."

Backed by the support of the U.S. Congress, the Federal Department of Defense has provided valuable material and financial aid for the Congress, and other Federal agencies are planning active participation in its work. Besides contributions to the technical program, displays and demonstrations of equipment by government institutions will be included in the Exhibit area.

Organization of the Congress

At the head of the Congress structure, the following Committee of Honor represents the multiplicity of interest in high-speed photography applications throughout government and industry:

- Dr. Detlev W. Bronk*, President, National Academy of Sciences
- Dr. John M. Clark*, General Manager, Photo Products Dept., E. I. du Pont de Nemours & Co.
- Edward P. Curtis*, Vice-President, Eastman Kodak Company
- Donald W. Douglas, Sr.*, Chairman of the Board of Directors, Douglas Aircraft Company

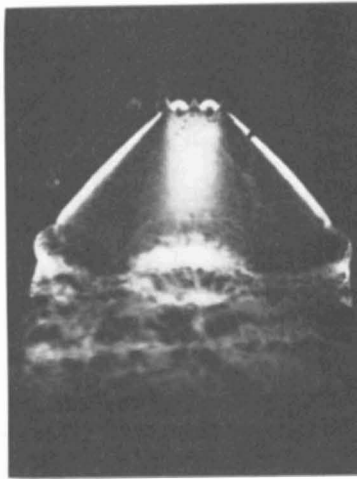


Left: Fractional microsecond Kerr-cell exposure of colliding detonation waves in explosives; right: fractional microsecond Kerr-cell exposure of detonation front in notched explosive charge. (Photos: Ballistic Research Laboratories, Aberdeen Proving Ground, Md.)

- Dr. Harold E. Edgerton*, Department of Electrical Engineering, Massachusetts Institute of Technology
- Dr. James B. Fisk*, President, Bell Telephone Laboratories, Inc.
- Dr. T. Keith Glennan*, Administrator, National Aeronautics & Space Administration
- G. K. Hartmann*, Technical Director, U.S. Naval Ordnance Laboratory
- Dr. James R. Killian, Jr.*, Chairman of the Corporation, Massachusetts Institute of Technology
- Dr. Paul E. Klopsteg*, Chairman of the Board of Directors, American Association for the Advancement of Science
- Dr. William H. Pickering*, Director, Jet Propulsion Laboratory, California Institute of Technology
- Dr. Simon Ramo*, Executive Vice-President, Thompson Ramo Wooldridge Inc.
- Dr. C. Guy Suits*, Vice-President, General Electric Company
- Dr. Theodore von Kármán*, Chairman, Technical Advisory Board, Aerojet General Corporation
- Dr. Herbert F. York*, Director of Defense Research and Engineering, Department of Defense

CHAIRMAN OF THE CONGRESS: *Max Beard*, U.S. Naval Ordnance Laboratory — Address: 10703 E. Nolcrest Dr., Silver Spring, Md., U.S.A.

DEPUTY CHAIRMAN: *Prof. Dr.-Ing. H. Schardin*, Rosenstrasse 10, Weil am Rhein, Baden, West Germany



The detailed work of arranging the technical program of the Congress is in the hands of the following men:

- Associate Chairman and Program Coordinator: *Morton Sultanoff*, Ballistic Research Labs., Aberdeen Proving Ground, Md., U.S.A.
- Associate Papers Program Chairman: *Richard O. Painter*, General Motors Proving Ground, Milford, Mich., U.S.A.
- Associate Program Chairman for Papers From Abroad: *Dr. J. S. Courtney-Pratt*, Room 1D-449, Bell Telephone Laboratories, Murray Hill, N.J., U.S.A.

Associate Program Chairman in Charge of Film Showings: *James A. Moses*, U.S. Army Signal Corps—Address: 1202 Oberlin Dr., Bucknell Hgts., Alexandria, Virginia, U.S.A.

Foreign delegates, who have been responsible for gathering papers and promoting interest in the Congress in their own countries, are:

- Belgium:* F. TOPFER, 15 rue Sohet, Liège, Belgium
- Canada:* ALEXANDER EASSON, Computing Devices of Canada, Ltd., P.O. Box 508, Ottawa 4, Ontario, Canada
- Czechoslovakia:* VACLAV KOLAR, Institute of Hydrodynamics, Solinova 7, Praha 6, Dejvice, Czechoslovakia
- France:* Ing. Mil. en Chef de 1° Cl. P. FAYOLLE, Laboratoire Central de l'Armement, Fort de Montrouge, Arcueil/Seine, France
- Germany:* Prof. Dr.-Ing. H. SCHARDIN, Rosenstrasse 10, Weil am Rhein, Baden, West Germany
- Greece:* Prof. Dr. P. SANTORINI, Université Technique

Nationale, Laboratoire de Physique Experimentale II, P.O.B. 49, Athens, Greece

India: Prof. KARTA SINGH, Head of Faculty of Chemistry and Metallurgy, Institute of Armament Studies, Kirkee, Poona 3, India

Israel: G. NAHMANI, Ministry of Defense, Scientific Department, Hakiryas, P.O.B. 7062, Tel-Aviv, Israel

Japan: TSUNEYOSHI UYEMURA, Institute of Industrial Science, University of Tokyo, Yayoi-cho, Chiba City, Japan

Netherlands: Dr. J. G. A. de GRAAF, Central Technical Institute, T.N.O., Koningskade 5, The Hague, Netherlands

Norway: KAYE WEEDON, Boks 137, Ramstad near Oslo, Norway

Sweden: Civ. Ing. TRYGGVE RAMQVIST, Forsvarets Forskningsanstalt, Stockholm 80, Sweden

Switzerland: Prof. Dr. J. EGGERT, Photographisches Institut der Eidgenössischen Technischen Hochschule, Zürich, Sonneggstr. 5, Switzerland

U.S.S.R.: A. I. TCHERNYI, Gularnaya Str. 4 App. 5, Leningrad-3, U.S.S.R.

United Kingdom: Dr. R. F. SAXE, Queen Mary College, Mile End Rd., London E. 1, England

In their work of collecting technical contributions the Foreign Delegates have been assisted by the SMPTE National Regional Papers Committee Chairmen in their respective areas.

GENERAL CHAIRMAN OF LOCAL ARRANGEMENTS: *Byron Roudabush*, Byron Motion Pictures, Inc., 1226 Wisconsin Ave., N.W., Washington 7, D.C.

Serving under Mr. Roudabush are the following Chairmen:

Exhibits: *Keith Lewis*, Eastman Kodak Company, 1000 Connecticut Ave., N.W., Suite 1101, Washington 6, D.C.

Registration: *Howland Pike*, Ansco, 3408 Wisconsin Ave., N.W., Washington, D.C.

Government Liaison: *Adm. Robert S. Quackenbush, Jr.*, 2412 North Quincy St., Arlington, Va.

Hotel Arrangements: *Arthur Rescher*, Capital Film Laboratories, Inc. 1905 Fairview Ave., N.E., Washington, D.C.

Interpretation: *Garland C. Misener*, Capital Film Laboratories, Inc., 1905 Fairview Ave., N.E., Washington 2, D.C.

Public Address and Recordings: *J. Clinton Greenfield*, Motion Picture Sound Dept., U.S. Naval Photo Center, Anacostia 20, D.C.

Projection: *Wilson E. Gill*, Wilson Gill, Inc., 1 Thomas Circle, Washington, D.C.

Hospitality: *Fred W. Gerretson*, E. I. du Pont de Nemours & Co., Inc. National Press Bldg., Washington, D.C.

Reception: *Nathan D. Golden*, Director, Scientific Motion Picture & Prod., Business & Defense Services Adm., Dept. of Commerce, Washington 25, D.C.

Banquet: *Dudley Spruill*, Byron Motion Pictures, Inc., 1226 Wisconsin Ave., N.W., Washington 7, D.C.

Entertainment: *Dean F. Lawson*, Eastman Kodak Co., 1350 Okie Street, N.E., Washington 13, D.C.

Ladies' Committee: *Henry M. Fisher*, 4003 Underwood St., Chevy Chase 15, Md.

Co-Hostesses: *Mrs. Keith Lewis*, 7117 W. Greenvale Pkwy., Chevy Chase, Md.; and *Mrs. Garland Misener*, 915 Clemson Dr., Alexandria, Va.

Closed Circuit TV: *Lewis Blair*, Walter Reed Army Medical Center, Washington, D.C.

Transportation: *Jack Jiruska*, P.O. Box 2, Annapolis, Md.

Awards Session: *Joseph E. Aiken*, 116 North Galveston, Arlington, Va.

Auditor: *Charles E. McGowan*, 236 Jefferson St., N.W., Washington, D.C.

Publicity: *Stuart Cameron*, RCA Press Relations, RCA Bldg., 1725 K St., N.W., Washington 6, D.C.

Papers Program

As a result of the efforts of the Topic Chairmen (listed in the *November 1959 Journal*, p. 771), the National Regional Papers Committee Chairmen and the Foreign Delegates, well over 100 papers have been submitted. These are still in process of review for their technical suitability and interest. So far, 96 papers have been accepted for presentation at the Congress, and these are listed, by sessions, at the end of this report.

There will be three official languages used: English, French and German. Simultaneous interpretation will be provided for all papers and individual headset 4-channel radio receivers will offer registrants the choice of hearing a paper in any of these languages, with an additional channel for directly tuning in the speaker, moderator or voice from the floor. Professor Stefan Horn, Georgetown University, and his team of interpreters, will provide the translation services.

Since it will not be possible to present all the accepted papers in full, some will be summarized by the author or session chairman and some published only in the Proceedings. This single-volume record of the Congress will include all papers accepted, with abstracts in the three official languages. A number of the important papers will also be published in the *Journal*. In some cases where the subject matter would make it more appropriate, the Society will endeavor to arrange for publication in the Journals of other Societies.

Congress Arrangements

There will be at least two guest speakers. At the official Opening of the Congress on Monday evening, October 17, the welcoming address will be given by Dr. Crawford H. Greenewalt, President of E. I. du Pont de Nemours & Co. On Tuesday evening there will be a session for the presentation of SMPTE Awards, and J. Lewis Powell, of the Office of the Assistant Secretary of Defense, will be the featured speaker. He will speak on "The Collapse of Time."

For those arriving in Washington on Sunday there will be a social get-together Sunday evening in the Sheraton-Park. It is expected that some outstanding musical entertainment will be provided by the Soldiers' Chorus of the U.S. Army Field Band. Sunday afternoon there will be an opportunity for registrants to attend an impressive Retreat Ceremony at Fort Myer, Va., held in honor of the High-Speed Congress.

A floor show is planned for Wednesday evening, and a dinner on Thursday evening will honor the Foreign Delegates. It should be noted that all the social events planned will be included in the registration fee. Also, tours are available.

For the ladies there will be an interesting program of activities, also covered by an inclusive registration fee. A tour of Washington will be included, tea at one of the foreign embassies, a visit to the White House, and a boat trip down the beautiful Potomac past historic Alexandria to Mount Vernon.

Equipment Exhibit

Manufacturers of high-speed cameras, optical goods, laboratory instruments and all types of instrumentation and data-recording equipment will have their latest products available on display for registrants to examine. This feature has been found most useful at previous Congresses. Besides many commercial displays there will be a number of demonstrations and exhibits by government agencies and other public institutions, for whom booths are reserved.



SPSE Symposium on High-Speed Processing, in conjunction with 5th International Congress on High-Speed Photography, October 14 and 15, Shoreham Hotel, Washington, D.C. For more details, see p. 500.

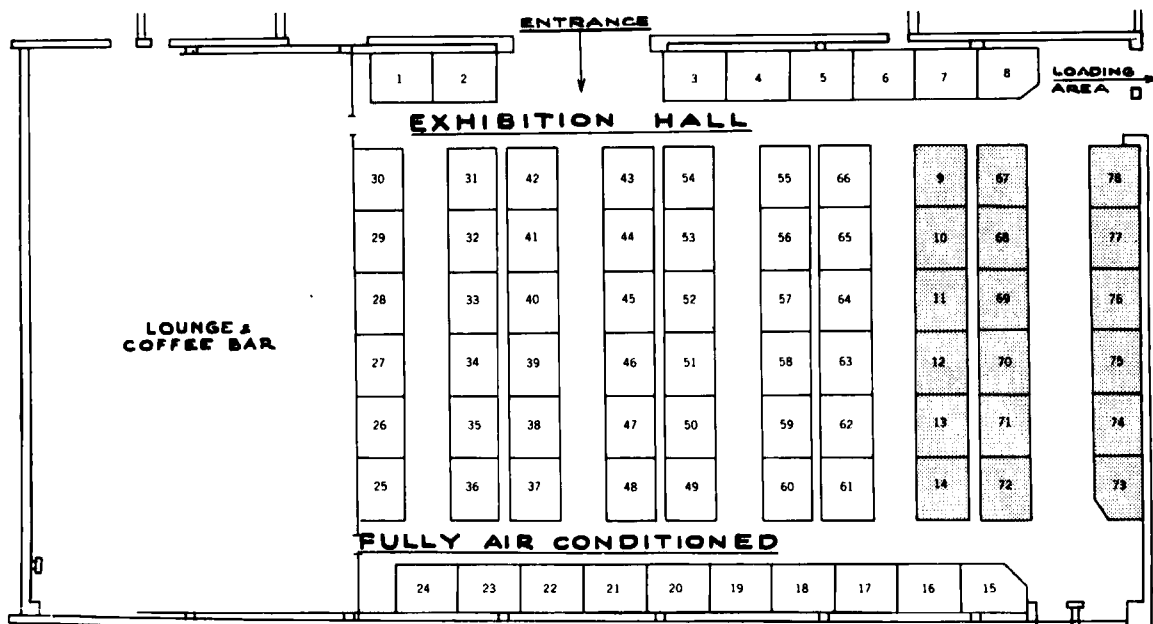
Exhibit



Fifth International Congress on High-Speed Photography

Displays and demonstrations of instrumentation and high-speed photographic equipment from manufacturers all over the world. See the newest developments in specialized electronic, optical and mechanical photographic instrumentation devices for all applications.

Government and Industry Exhibits will be featured.



FOR RESERVATIONS

contact the Exhibit Chairman:
 Keith B. Lewis, Eastman Kodak Co.,
 1000 Connecticut Ave., N.W.
 Suite 1101, Washington 6, D.C.

EXHIBIT SPACE RENTAL RATES

Booths 1-2-3-4-30-31-42-43-54-55	\$350
Booths 15 to 19 incl. and 61 to 66 incl.	250
All other booths	300

Booths 9 to 14 and 67 to 78 inclusive are being reserved for military and institutional exhibits.
 All booths are 8 x 10 ft in size.

October 17-21, 1960

SHERATON-PARK HOTEL, WASHINGTON, D.C.

The Exhibit Chairman, Keith Lewis, recently opened up the exhibit space to general allocation of booths. So far, the following companies have reserved space for their equipment:

Arriflex Corp. of America	Edgerton, Gerneshausen & Grier, Inc.
Avco Research & Advanced Dev. Div.	Fairchild Camera & Instr. Corp.
Beckman & Whitley, Inc.	Field Emission Corp.
Benson & Lehner, Inc.	Florman & Babb, Inc.
Camera Equipment Co.	Dr.-Ing. F. Früngel GmbH
Computer Measurements Co.	General Aniline & Film Corp.
E. I. du Pont de Nemours & Co. Inc.	Anso
Eastman Kodak Co.	Systems Development Dept.

Heico, Inc.	Photo Sonics Inc.
Karl Heitz, Inc.	Polaroid Corp.
Hi Speed Equipment, Inc.	Prestoseal Mfg. Co.
L-W Products	Traid Corp.
Motion Picture Enterprises	Westinghouse Elec. Co. Lamp Div.
Neumade Products Corp.	Wollensak Optical Co.
D. B. Milliken Co.	Carl Zeiss Inc.
O'Connor Engineering Labs	Zoomar, Inc.
Photo-Animation Inc.	

Other companies wishing to exhibit their products in the space still remaining should contact Keith Lewis, Eastman Kodak Co., 1000 Connecticut Ave., N.W., Suite 1101, Washington 6, D.C.

5th Congress-Papers by Session Subjects

Short Duration Light Sources

- Holdover in Xenon Flash Lamps, *Dr. Harold E. Edgerton and David Cahlander, Dept. of Electrical Engineering, Massachusetts Institute of Technology, Cambridge, Mass.*
- The Control of High-Power Xenon Flashes by Magnetic Switching, *Dr. E. J. G. Beeson, AEI Lamp & Lighting Co. Ltd., Milton Road, Leicester, England.*
- Flash-Light Source Measurement, *George H. Lunn, Aldermaston, Berks, England*
- Utilisation de Lampes Explosives Pour la Photographie par le Système Schardin, *Dr. Louis Deffet, Centre de Recherches Pour l'Industrie des Produits Explosifs (and Laboratoires des Hautes Pressions) Tir National, Place des Carabiniers, Brussels, Belgium; and R. Vanden Berghe, Centre de Recherches Scientifiques et Techniques Pour l'Industrie des Produits Explosifs, Val du Bois, Sterrebeek, Brabant, Belgium.*
- Explosive Flashlight—A New Development in an Explosion Light Source, *R. H. Stressau, 7 Summit Rd., Lake Zurich, Ill.; and Jack Gershon, 6245 North Oakley Ave., Chicago, Ill.*
- High-Intensity Explosive Light Sources, *Zev Pressman, Stanford Research Institute, Stanford Village, Menlo Park, Calif.*
- High-Intensity Fractional Microsecond Light Source, *Earle B. Brown, Farrand Optical Co., 4401 Bronx Blvd., New York, N.Y.*
- Millimicrosecond Light Source With Increased Brightness, *Dr. Heinz Fischer, CRRCP, L. G. Hanscom Field, Bedford, Mass.*

Applications of Light in High-Speed Photography

- High-Speed Photography Using Ultra-Violet Light to Eliminate Visible Light Masking In Self-Illuminating Events, *R. Wayne Anderson, Photo Lab., The Dow Chemical Co., Midland, Mich.*
- Die Anwendung der Mehrfachfunkenkamera bei der Untersuchung von Vorgängen, die eine hohe Gesamtinformation verlangen, *Dr.-Ing. H. Schardin, Rosentr. 10, Weil am Rhein, Baden, West Germany.*
- Motion Pictures of Rapid Air Currents and Shockwaves by Means of High-Frequency High-Voltage Sparks, *Dr.-Ing. Frank Früngel, Walter Thorwart and H. G. Patzke, Dr.-Ing. Frank Früngel GmbH, Hamburg-Rissen, Germany.*
- A Modern Shadowgraph System for Use in High-Velocity Aeroballistic Ranges, *Paul Thurston, Paul H. Cords, Jr., and W. R. Noyes, Photographic Div., U.S. Naval Ordnance Laboratory, White Oak, Md.*
- Submicrosecond Flash Sources, *Dr. Harold E. Edgerton, K. W. Cooper and J. Tredwell, Massachusetts Institute of Technology, Cambridge, Mass.*
- A High-Intensity Square Pulse Light Source for High-Speed Photography, *Lemuel L. Hill, Gas Dynamics Div., U.S. Naval Ordnance Laboratory, White Oak, Silver Spring, Md.*

Electric and Electronic Shutters

- Image Converter System With Fast Image Group Repetition Rate, *John H. Hett and R. King, Hett Associates, 24 Burton Place, Cresskill, N.J.*
- Development of Photographic Electronic Shutter Tubes, *L. Mandell, Imperial College of Science and Technology, London, England.*
- The "Astrocon" Tube and Its Application to High-Speed Photography, *A. E. Anderson and G. W. Goetze, Physics Project Laboratory, Westinghouse Research Laboratories, Beulah Rd., Churchill Borough, Pittsburgh 35, Pa.*
- A Kerr-Cell Camera With Synchronized Light Source for Millimicrosecond Reflected-Light Photography, *George A. Theophanis, Avco Corp., Research & Advanced Development Div., 201 Lowell St., Wilmington, Mass.*
- Multiple Kerr-Cell System With Square Shuttering Characteristics, *Dr.-Ing. Frank Früngel and L. Liebing, Dr.-Ing. Frank Früngel GmbH, Hamburg-Rissen, Germany.*

Stereo, Spectra and Micro Studies

- Design and Application of a High-Speed Time-Resolving Spectrograph, *Donald Baker Moore and John K. Crosby, Stanford Research Institute, Stanford Village, Menlo Park, Calif.*
- High-Speed Spectroscopic Instruments, *Dr. F. D. Harrington, U.S. Naval Research Laboratory, Washington, D.C.*
- A Stereoscopic High-Speed Framing-Camera Technique for the Study of Shaped-Charge Liner Collapse, *Bradley O. Reese, Stanford Research Center, Stanford Village, Menlo Park, Calif.*
- High-Speed Photographic Recording of Dual Data at High Magnification, *B. H. Amstead, College of Engineering, University of Texas, Austin 12, Texas.*
- High-Speed Motion-Picture Photography of Microscopic Phase Changes, *Dr. J. E. Benjamin and J. W. Westwater, 213 East Chemistry Bldg., Division of Chemical Engineering, University of Illinois, Urbana, Ill.*

Cameras: Sweep and Streak

- An *f/1* Streak Camera for Use in the Ultra-Violet, *J. Dyson, R. F. Hemmings and R. T. Waters, Associated Electrical Industries Ltd., Research Laboratory, Aldermaston Court, Aldermaston, Berks, England.*
- Streak Camera Development at the National Research Council, *E. H. Dudgeon, National Research Council, Division of Mechanical Engineering, Ottawa, Canada.*
- The Improved *f/10* Sweeping-Image Camera: A Versatile Model for Explosive Research, *Berlyn Brixner, P.O. Box 1663, Los Alamos, N.M.*
- A High-Speed Rotating Mirror With Greater Dynamic Resolution, *Willard E. Buck, Box 357, Boulder, Colo.*
- VFK-UVQJM High-Speed Drum Camera, *Jam Hampl, Meopta Optics and Fine Mechanics, Research Institute, Prerov, Czechoslovakia.*