CHICAGO, Sept. 28—Dr. Hans C. Wohlrab, Director of Engineering, Professional Dept., Bell & Howell Co., presented a two-part tutorial paper on "Light and Color, Some Old and New Facts," to 150 members of the **Chicago Section** and the Chicago Section of the S.P.S.E. The meeting was held at the Bell & Howell Co. plant in Lincolnwood, Ill.

The first part of Dr. Wohlrab's paper reviewed information about the nature of light and color, the mechanism of color perception, and the psychology of color perception. Slides were shown to demonstrate various visual effects.

The second part provided information about light interference, coherent and non-coherent light, lasers and their possible application to photography, and recent developments in hologram techniques.—Allen F. Hilliard, *Secretary-Treasurer*, 164 N. Wacker Dr., Chicago, Ill. 60606.

CHICAGO, Nov. 16—A program on medical motion-picture photography was presented to 47 members of the **Chicago Section** by Frederick T. Sharp, Principal Scientific Photographer, University of Illinois Medical Center, Chicago. The meeting was held at the Medical Center.

Sharp, who supervises the Central Photographic Unit for the Colleges of Medicine, Dentistry, Pharmacy and Nursing at the University Medical Campus, described the functions of the unit. Special emphasis was given to the use of motion pictures for surgery and cinefluoroscopy. Dr. Harry A. Bliss showed examples of cinefluoroscopic motion pictures of the human heart and described their value in the diagnosis of heart diseases. Richard Bowman, Instructional Television Coordinator, described the components and educational use of the closed-circuit television system at the Medical Center Campus.—Allen F. Hilliard, *Secretary-Treasurer*, 164 N. Wacker Dr., Chicago, Ill. 60606.

DENVER, Nov. 23—The Planetarium of the United States Air Force Academy was the site for the November meeting of the **Denver Section** where 18 members and 10 guests attended.

After Chairman John I. Newell announced the results of the Denver Section election, Maj. E. R. Therkelsen presented a program on planetarium lectures and the backstage details. Academy personnel designed and built many of the special projectors and other equipment.

Arrangements were made by Jackson Cravens, KOAA-TV, Pueblo, Colo., Refreshments were served during the backstage tour.—Sidney Davidson, *Secretary-Treasurer*, 2424 S. Dahlia St., Denver 22, Colo.

DENVER, Jan. 25—Seventeen members of the **Denver Section,** 16 members of the student chapter of the University of Denver and guests attended the January meeting of the section held at the University of Denver Radio-TV-Film Dept. A short business meeting was held prior to the regular meeting where Chairman Myron P. Smith urged members to contribute "more than their share" towards a membership campaign, programs, and technical papers for SMPTE Conventions.

Mrs. Marcia Higgins, makeup artist for Ball and Davidson Advertising, Inc., presented a demonstration on the use of makeup for film and television. She was assisted by Mrs. Shirley Rumsey, a model from Powers Agency, Denver.

The make-up demonstration was televised to present the before-and-after on monochrome videotape, and on black-and-white film, of the technical problems.

Refreshments were served between the demonstration and the videotape playback.

Arrangements were made by Stanley Phillips and the Radio-TV-Film Dept. of the University of Denver.—Sidney David-

son, *Secretary-Treasurer*, 2424 S. Dahlia St., Denver 22, Colo.

DETROIT, Dec. 9—The December meeting of the **Detroit Section** opened with the showing of a recent commercial film produced by the Jam Handy Organization.

The first speaker was Jack Zuidema, Eastman Kodak Co., who spoke on "Two New High Speed Ektachrome Motion Picture Films." Slides were shown illustrating the relative granularity and resolution characteristics of these new films and the present high-speed Ektachrome films. Also shown were tables giving the process steps and times for the new films compared with the present films, emphasizing the simplicity and shorter time involved in the new process.

Motion-picture comparison films were also shown illustrating improved resolution and grain characteristics of new daylight and type B films. The degree of color shift and granularity effects when the new films were processed for exposures ranging from minus 1 to plus 3 stops were shown.

Raymond A. Balousek, Producers Color Service, spoke on the "Standards and Techniques in Filmstrip Production." He illustrated his talk, showing improvements in color rendition with new methods.

The meeting, which was held at the Jam Handy Organization, was followed by an open house at Producers Color Service. Eighty-five persons attended.—Richard O. Painter, *Secretary-Treasurer*, 811 Atlantic, Milford, Mich.

DETROIT, Jan. 13—The January meeting of the **Detroit-Cleveland Section** was held in the auditorium of the Detroit News where 58 attended. A pre-meeting motion picture describing the function and operation of National Educational Television entitled *A Progress Report*, was introduced by Howard Town, Chairman. This color film described the methods, techniques and administrative operations of the NET facility at Ann Arbor, Michigan.

The main part of the program was a paper, "Image Orthicon Parameters vs Lighting and Picture Quality," by Fred Sachs, General Electric Co., Syracuse, N.Y. The paper described the performance characteristics of the latest image-orthicon camera tubes. It related to the effective use of high-quality tubes and the proper application of controlled studio lighting. Examples of lighting effects on the relationship of carefully selected colors and tones of paints as well as other background materials were presented. Complications of color in relation to the intensity of lighting materials and paints were examplified with numerically identified tonal values.

A set of well-prepared 2 x 2 slides was used to illustrate the lecture. Further, the presentation was reinforced by the use of two 16mm black-and-white motion pictures dealing with studio lighting.

The Detroit News provided refreshments. —John A. Campbell, *Secretary-Treasurer*, 14394 Penrod, Detroit, Mich. 48123.

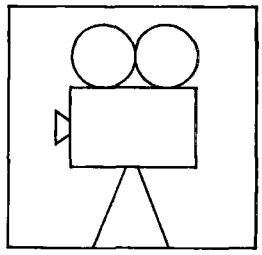
HOLLYWOOD, Jan. 18—*A Child's Introduction to the Cosmos*, a short animated film made by Hal Barwood in the University of Southern California Dept. of Cinema, opened the January meeting of the **Hollywood Section.** The meeting, held at the Walt Disney Studio in Burbank, was attended by 275.

A joint talk was given by Herbert E. Farmer, University of Southern California Dept. of Cinema, and Sidney P. Solow, Consolidated Film Industries, on motion-picture technology and training in the USSR. Farmer and Solow were two of the four delegates on a recent visit to Russia sponsored by the SMPTE under the terms of the Cultural and Scientific Exchanges Agreement between the United States State Dept. and the USSR.

During their stay, Farmer and Solow, along with Konstantine Pestrecov, IBM, and Saul Jeffee, President, Movielab Inc., visited studios, film processing laboratories, research and development centers and several training institutions (see *Journal*, October, 1965, p. 944). Many of their observations were illustrated and documented with slides.—Ted Fogelman, *Secretary-Treasurer*, 1057 S. Ogden Dr., Los Angeles, Calif.

HUNTSVILLE, Dec. 16—Charles W. Wykoff, Senior Scientist, Edgerton, Germeshausen & Grier, Inc., presented a detailed description of the Edgerton XR

Can't get a meter reading? Throw away the meter and start shooting with new EASTMAN 4X Pan Negative Film.



Available light is getting more available every day. Or every decade, at any rate. In 1954 we introduced *Eastman Tri-X* Panchromatic Negative Film, and the newsreel cameraman dared go out on a dark day. Now we're sending him out into the night. He'll go, confident of returning with usable footage no matter what the lighting conditions, thanks to *Eastman* 4X Panchromatic Negative Film.

He's already gone, of course. The film has been on the market for about a year now, and people are shooting it as if foot-candles were going out of style. A well-known European director who is bored by wide screen and bothered by color is quite excited by 4X. Recently a TV interviewer asked him whether it was true he had no interest in technological advances in the motion picture medium. On the contrary, he was extremely interested in 4X Pan. It would let him shoot existing light where before he had intruded on his actors with arc lights. And many of the world's most renowned still photographers are rolling their own and shooting with glee, if not with illumination.

Well, what about 4X Pan? And why a replacement for *Tri-X* Negative? Naturally, the manufacturers of photographic films are continually encouraged to extend the speed range of their products. And although *Tri-X* Negative served the need for shooting under extremely poor lighting conditions, it became evident that a still faster film would be useful in newsreel, industrial and night photography. Advances in emulsion technology have made 4X and its manufacture possible. 4X Pan has almost twice the speed of *Tri-X* Film – E.I. 500 Daylight as opposed to E.I. 320. The chart compares the speed of the new film with that of other Eastman panchromatic negative films.

EASTMAN NEGATIVE FILM	E.I. (TUNGSTEN)	E.I. (DAYLIGHT)
XT	20	25
PLUS-X	64	80
DOUBLE-X	200	250
TRI-X	250	320
4X	400	500

Shot wide open on *Tri-X* Pan Neg Film.

Shot wide open on *4X* Pan Neg Film.

The increased speed of 4X Pan provides the cameraman with capability for adequate exposure in extremely adverse lighting situations. Let us emphasize that adequate exposure can frequently be obtained even when the illumination is so low that a reading cannot be obtained with a meter, especially where reflection measurements are used. In these cases it will be necessary for you to base your exposure on the results of actual tests. Of course, you may want to use 4X even when the meter announces "high noon." It will give you great depth of field without an increase in lighting.

The new film has the same ability as *Tri-X* and *Double-X* Films to produce sharp images. And the speed of 4X Pan has been accomplished with no increase in granularity. As is true with other negative films, however, granularity increases with density of the negative, resulting in increased graininess in the print. It is therefore important to avoid overexposure. This precaution is even more important with this film because of its extremely high speed and the greater danger of overexposure.

Processing

The development time for the new negative is about the same as that for *Tri-X* Film. A time of 7 to 9 minutes in a developer such as *Kodak* D-96 (immersion-type process) and 1 to 2 minutes in a high-activity spray-type process will give a gamma of 0.65 to 0.70. The fixing, washing and drying conditions are similar to those used for the *Plus-X* and *Double-X* Films. The specific processing conditions, of course, must be based on sensitometric data obtained from your machine, since developer formulation, machine design, agitation and temperature all have a direct effect on the speed and contrast of the film-process system. The new film is not intended for high-temperature processing.

Eastman 4X Film isn't a panchromatic panacea. You do need *some* light to shoot, you know. But it does solve serious existing light problems. In case of another blackout in the Northeast (or, heaven help you, in your section) keep a supply of candles on hand. And, oh yes, to record it all – *Eastman* 4X Panchromatic Negative Film.

EASTMAN KODAK COMPANY
Rochester, N. Y.

ATLANTA: 5315 Peachtree Industrial Blvd., Chamblee, Ga. 30005, 404—GL 7-5211; CHICAGO: 130 E. Randolph Dr., 60601, 312—236-7234; DALLAS: 6300 Cedar Springs Rd., 75235,214—FL 1-3221; HOLLYWOOD: 6677 Santa Monica Blvd., 90038,213—464-6131; NEW YORK: 200 Park Avenue, 10017,212—MU 7-7080

wide exposure latitude film to the **Huntsville Section** at its December meeting.

Eleven members attended the meeting held at the Theater of the U.S. Army Missile Museum, Redstone Arsenal. A lengthy question-and-answer period followed the presentation.—Bernard H. Mollberg, *Chairman*, 1005 Kennamer Dr. S. E., Huntsville, Ala.

MONTREAL, Jan. 11—Papers by two Eastman Kodak scientists highlighted the January **Montreal Section** meeting held at the National Film Board. Approximately 130 persons attended in spite of extremely cold weather.

Al Williams discussed "Viscous-Layer Processing of Eastman Color Internegative and Color Print Films," and described a method developed for processing the Internegative and Color Print films by application of a thin coating of viscous solutions. According to Williams, the viscous-layer process is operated in an atmosphere saturated with water vapor. The results obtained by this technique are equal in quality to those obtained in the conventional deep-tank system. The viscous-layer process eliminates the agitation variable among various processing installations, Williams said, and since the developer is used once, and then discarded, chemical control problems are reduced substantially.

Daan Zwick presented a paper on "Some Aspects of Film as Source Material for Color Television." Zwick said that while photographic film and television images have some distinct differences, the stable, visable and easily stored film image can complement the transient, easily manipulated television signal. Zwick discussed arguments for using a "normal" contrast reversal color film as source material for color television, in spite of the limited luminance range available to television. Zwick suggested a Type B high-speed 16mm color film for newsreel use.—Arnold C. Schieman, *Secretary-Treasurer*, 155 58th Ave., Laval des Rapides, Que., Canada.

ROCHESTER, Jan. 6—A paper on Thermoplastic picture recording was presented by Townsend MacCoun at the meeting of the **Rochester Section.** The meeting, where 230 attended, was held at the Dryden Theater.

MacCoun discussed the current status of thermoplastic picture recording as applied to motion pictures and demonstrated the optical systems required for both color and black and white. He also showed 35mm photographic prints prepared from 16mm thermoplastic original recordings.—Robert C. Lovick, *Secretary-Treasurer*, 88 Hillhurst La., Rochester 17, N.Y.

SAN FRANCISCO, Dec. 14—Robert E. Lewis, Manager, Photo-Optics Dept., Amelco Semiconductor, Mountain View, Calif., presented a two-hour talk on the new electro-photo-optics technologist training program at Foothill College, before 16 members of the **San Francisco Section.**

Using a transparency projector and handouts, much information was covered, including the training given on high-speed and photo-data recording; geometrical optics; laser application; metric photography; photography for microcircuits; and space optics.

The audience was highly interested in Lewis' discussion, as evidenced by the many questions asked. The meeting was held at KGO-TV.—John B. Steiger, *Secretary-Treasurer*, 13456 Mandoli Dr., Los Altos Hills, Calif. 94022.

SAN FRANCISCO, Jan. 11—In a joint meeting between S.P.S.E., S.P.I.E. and the **San Francisco Section,** Raymond F. Grant, Eastman Kodak Co., read a paper on "Two New High Speed Motion Picture Films," and Dr. Lee Tepley, Lockheed Missiles and Space Corp., discussed "Underwater Motion-Picture Photography." The meeting was held at the Eastman Kodak Co. where 132 persons attended.

Grant's paper on the new Ektachrome films, had been given at the 98th SMPTE Technical Conference in Montreal last November. Examples of the new films were shown, from the photographic and processing aspects.

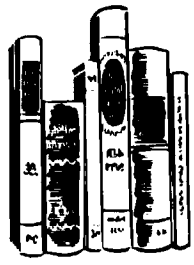
Dr. Tepley showed many of his underwater films which he had taken during his travels with Lockheed. Films from the South Pacific, Bahamas and off the California coast were shown, which were taken with available and artificial light. He also displayed home-made underwater camera and lighting equipment.—John B. Steiger, *Secretary-Treasurer*, 13456 Mandoli Dr., Los Altos Hills, Calif. 94022.

WASHINGTON, D.C., Feb. 8—Two Eastman Kodak scientists presented papers at the meeting of the **Washington, D.C. Section.** Forty-five persons attended the meeting held at the National Academy of Sciences.

Raymond Wolfe first described the new method of processing Eastman Color Internegative and Print Films by application of thin coatings of viscous solutions. Wolfe's presentation was accompanied by demonstration films comparing results of the new process with results of the conventional deep-tank system.

D. H. Horton discussed the characteristics of two new high-speed Ektachrome motion-picture films, Types 7241 and 7242. He emphasized that these new films will have wide application in the color television news, sports, industrial and educational fields. Using film-clip comparison, it was shown that there is an improved sharpness, grain and color rendition in the new film stocks without a sacrifice of speed.

A short question-and-answer period followed each paper, after which refreshments were served compliments of the Eastman Kodak Co.—Edward L. Janow, *Secretary-Treasurer*, 2719 Birdseye La., Bowie, Md.



books reviewed

Errata

The last paragraph of the book review by Pierre Mertz on *Electrophotography* (*Journal*, pp. 62 and 64, Jan. 1966) was in the editorial work of page make-up incorrectly placed at the end of his book review of *Modern Optics* (p. 64). The review of *Electrophotography* should have ended as follows:

"One can certainly say that the book is a necessary text to any person who is involved in electrographic processes, copying machines, or related portions of the art.—*Pierre Mertz*, Consultant, 66 Leamington St., Lido Beach, L.I., New York 11561."

Dr. Mertz's review of *Modern Optics* should have ended with the following paragraph:

"All in all, the book will be found useful not only for self-study but for general reference. Even where other reference books are handy, differences in treatment can elucidate occasionally puzzling points. All this is assuming that the reader can afford these costly books.—*Pierre Mertz*, Consultant, 66 Leamington St., Lido Beach, L.I., New York 11561."

Xerography and Related Processes

By J. H. Dessauer and H. E. Clark. Published (1965) by Focal Press, Inc., 20 E. 46 St., New York, N. Y. 10017. 520 pp. Illus. Diagrams. 9½ by 7 in. Price $38.00.

The Introduction to *Xerography and Related Processes* states: "The contributions assembled here comprise the first book on the new technology of xerography. In important respects xerography is unique as a modern invention. It is clearly and unequivocally the creation of one man, Chester F. Carlson. In this creation he synthesized a method of photo-reproduction which invoked for the purpose obscure phenomena, neglected separately, and never conceived of as capable of functioning usefully in the forms or combinations he proposed."

However the above may be, in more recent times there have been a great many others who have contributed to the art. The literature in this field is burgeoning. (See a review of another Focal Press book, *Electrophotography*, in the January *Journal*, pp. 62-64.)

The book consists of papers contributed by members of the staffs of the Research and Engineering Division of Xerox Corp. and the Applied Research Division of Battelle Memorial Institute. With the exception of the first and last chapters of the book (History of Electrostatic Recording, by Chester F. Carlson; and Some Applications