quate questions and answers. — Ralph W. Sonnenberg, *Secretary-Treasurer.*

TORONTO, Oct. 15 — An excellent film, *World of the World Cup,* on skiing, introduced the meeting. K. Davies, Central Dynamics, presented a paper on Time Codes for Tape, which was a presentation of a recommended practice for audio- and videotape code for editing use. A review of many systems was made and presentation of this system which is believed by the author to be a universally applicable system. A brief question period followed the paper which was well received. A coffee break followed.

The second paper, "Color Duplication 1950–1970," by Ivor Lomas, Film House Ltd., outlined a condensed history of color duplication systems applied in the last twenty years and some of the problems entailed. The paper concluded with an excellent example of color reversal intermediate duplication at its best. — S. F. Quinn, *Secretary-Treasurer.*

ROCHESTER, Oct. 15 — Dr. Paul Gilman, Jr., Dr. Wesley T. Hanson and Dr. Rex B. Pontius, Eastman Kodak Co., made a report on the recent International Congress of Photographic Science. The Congress, held only every three or four years, was held this summer in Moscow. The speakers interpreted the significance of the technical presentations and, with color slides, shared their impressions and personal experiences on visits in and around Moscow. Attendance was 100.

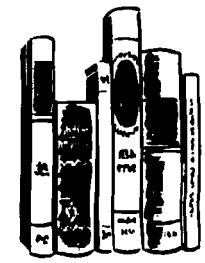
A pre-meeting dinner for the speakers was held at the Treadway Inn. — R. A. Morris, *Secretary-Treasurer.*

ATLANTA, Oct. 22 — Fifty-nine members and guests attended the Atlanta Section meeting at WAGA-TV. A short business meeting preceded the program given by Rodger J. Ross, Supervisor of Technical Operations, Canadian Broadcasting Corp. Mr. Ross is a leading authority on color telecine operation, and his program stressed the importance of standardization of the color temperature of film prints for television. Alignment slides and equipment are now available for all TV stations to standardize their telecine equipment. Daylight balanced prints were shown side by side on a correctly adjusted TV monitor and the new daylight balanced projection system for preview rooms was also shown. The filter on the projection system was then removed to show in contrast how an uncorrected print would appear.

Eastman Kodak Co. will supply brochures on the television film preview room for anyone interested.

An informal question-and-answer session provided the answers to many questions and doubts that many producers and advertising agencies had about switching over to the new recommendations discussed by Mr. Ross.

Refreshments were served during a social period after the meeting. — G. M. Crowder, *Secretary-Treasurer.*



books reviewed

Applied Optics and Optical Engineering, Vol. V

Ed. Rudolf Kingslake. Published (1969) by Academic Press, Inc., 111 Fifth Ave., New York, NY 10003. 382 + xvi pp. Illus. Diagrams. 6 by 9 in. Price $17.00.

The fifth and last volume of this series continues on the subject of "Optical Instruments" and forms Part II of that subject. As with the previous volumes, special experts in their fields have contributed the various chapters. For this volume there are no less than twelve of these authorities.

The subjects treated here are Dispersing Prisms, Diffraction Gratings, Spectrographs and Monochromators, Spectrophotometers, Colorimeters, Astronomical Telescopes, Military Optical Instruments, Surveying and Tracking Instruments, Medical Optical Instruments, Opthalmic Instruments and Motion Picture Equipment. This is a rather long list, and only the last item will be commented upon here.

Under this subject six topics are considered, namely, Film, Cameras, Sound Recording, Printers and Projection. This is an ambitious project for the 40 or so pages allotted to the subject. Nevertheless, a generally good summary is given for each topic, and frequent references are given to the original literature for more details. In a number of cases, for example, camera lens optics, some of the details were treated in earlier volumes of the series. It is interesting to note that the remarkable growth and extensive technical development in the field of amateur motion-picture photography in recent years are indicated by the amount of space and technical detail devoted to it here.

A separate cumulative index is included in this final volume, to cover the combined subject matter of all five. This is of great convenience for reference use, because it obviates the need of selecting the appropriate volume in advance. As has been indicated for the earlier volumes, this set as a whole is most important for any technical worker generally involved in optical problems. — *Pierre Mertz,* Consultant, 66 Leamington St., Lido Beach, L.I., NY 11561

Thin Film Technology

By Robert W. Berry, Peter M. Hall and Murray T. Harris (Members of the Tech-

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SCOOPIC 16

nical Staff, Bell Telephone Laboratories). Published (1968) by D. Van Nostrand Co., 120 Alexander St., Princeton, NJ 08540. 706 pp. Diagrams. 6 by 9 in. Price $15.00.

The book is one of the Bell Telephone Laboratory Series and deals with the development and application of thin films in the electronics industry. It treats the various methods of film formation and related vacuum technology, the fabrication and understanding of resistor, conductor, capacitor and substrate materials, and the techniques of pattern generation, component and circuit design, lead attachment, and large-scale manufacturing. It provides, in many places, somewhat detailed chemical and physical explanations for the basic understanding of the phenomena discussed.

After an historical introduction to the development of thin films the authors give a thorough introduction to vacuum technology. This chapter and the one on electrical conduction in metals are the most mathematically proliferous but can be readily handled by the average engineer. Most of the remainder of the book contains little detailed mathematics. Numerous subjects are treated with "cook-book" descriptions containing valuable practical data for the engineer working in the field. But an excellent attempt is made by the authors to provide an understanding of the fundamental principles involved. As admitted in the Preface, the book is biased toward the application of tantalum-based films because of the authors' experience, but this does not detract from their general treatment of thin films. The conclusion of each chapter contains a convenient list of principal symbols employed. The last four chapters are particularly adapted for the engineer working in the area of manufacturing of thin film circuits and devices.

The book is written by men well chosen for the task due to their pioneering efforts in the field and it should prove to be a valuable practical guide for any engineer involved with the development of microelectronics or other thin film applications. — *James M. Smith,* RCA Corp., Astro-Electronics Div., P.O. Box 800, Princeton, NJ 08540

CATV System Engineering (3d ed.)

By William A. Rheinfelder. Published (1970) by Tab Books, Blue Ridge Summit, PA 17214. 256 pp. Diagrams. 5.5 by 8.5 in. Price $12.95.

The first edition of this book was reviewed in the May 1966 issue of the *Journal* by Irving S. Rosner. In a lengthy and detailed review, Mr. Rosner noted that the book would be "useful to any technician involved in the operation or maintenance of existing systems . . . the material is descriptive of current techniques and applications rather than tutorial."

A second edition appeared in 1967. The third edition has been extensively revised and expanded by the author to reflect the considerable advances in the CATV industry within the last two years. The book contains 14 chapters and seven appendixes (the first edition contained 10 chapters) and newly developed equipments and techniques used in cable television are described and evaluated. A glossary of CATV terms adds to the usefulness of the book and a list of references is given in an appendix. — *Edit.*

PAL Colour Television

By Boris Townsend. Published (1970) by the Syndics of the Cambridge University Press, Bentley House, 200 Euston Rd., London N.W. 1 (American Branch, 32 E. 57 St., New York, NY 10022). 227 + vii pp. Diagrams. 6 by 8 in. Price $10.00.

In his introduction Dr. Townsend writes, "This book is intended for the reader with a professional knowledge of monochrome television. It assumes a working understanding of the science of colorimetry and the manner in which the eye-mind complex interprets the light patterns which it receives."

The author takes the reader through an introductory chapter tracing the development of color television systems, and chapters describing display devices, picture generators, coding principles, and the NTSC system before reaching the PAL system. Subsequent chapters describe PAL coders and decoders, video recording techniques, and studio practices. The chapters describing the PAL system, PAL coders and decoders occupy about one-fifth of the book. Clearly, the book is intended for the European reader as a general text on color

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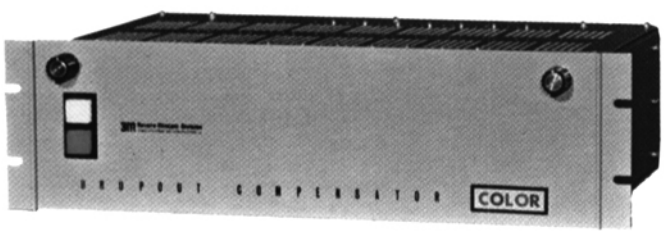

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television. But, it is not clear why PAL is reached via the historical route of the NTSC system. The author writes, "This book includes a chapter on the American System, since it provides a necessary step in reaching an understanding of the PAL system; the book is not intended as a textbook on NTSC, which has been comprehensively treated elsewhere." But it is an understanding of NTSC necessary before attempting an understanding of PAL!

The historical approach to the PAL system via the NTSC system has led to some confusion in the text; for example, on page 84 is written, "In the following brief description of the NTSC system, any numbers are those appropriate to the American system," but the diagrams on pages 98 and 103 show mostly European numbers. The use of the symbols U and V for the color difference signals will seem strange to North Americans. The section on Signal Tolerances describes the EBU derivation of overall tolerances for a (NTSC) color television system. The broadcast industry in North America is not so up-to-date.

Considerable space is devoted to colorimetry; the author uses mostly the CIE 1960 nearly uniform chromaticity scale (uv) diagram, in preference to the CIE 1931 xy chromaticity diagram, which is not used in serious work today. The author's explanations of the PAL system are, essentially, those of Bruch (Dr. W. Bruch, *Selected Papers II*, Telefunken-Leitung, June 1966) to whom the author makes tribute. The use by Bruch and Townsend of the symbols U and V for the color difference signals is confusing because the same letters are used in the CIE 1964 "uniform color space."

The book is easy to read, the explanations are laid out in a clear and orderly manner; the author avoids elaborate mathematical treatment. Much ground is covered in this short book (213 pages) and, as a consequence, some of the execution is sketchy. The reader may find the lack of references irritating; however a bibliography is included.—*S. F. Quinn*, Canadian Broadcasting Corp., 7925 Cote St. Luc Rd., Montreal 267, Que., Can.

The New York Times Film Reviews 1913–1968

Published (1970) by The New York Times & Arno Press, 229 West 43 St., New York, NY 10036. 5 vols. + 1 vol. Index. 3816 pp. Illus. 9⅜ by 12⅝ in. Price $395.

More than 16,000 critical evaluations of new films that appeared originally in The New York Times from 1913 through 1968 are republished in this history-making compilation that provides an exceptional source of reliable information for researchers, students of cinema art, professionals of the industry, and the legions of movie buffs. Libraries of educational institutions at all academic levels will find this set of books an indispensable addition to their reference shelves.

This work offers a panoramic view of world film production, as reflected in motion pictures released in New York. In this respect, a thorough study of the changing technology and artistry of film is made practical by the generally extensive evaluations of individual movies. Many reviews are signed. In other cases, initials permit the identification of such reputed critics as Renata Adler, Vincent Canby, Bosley Crowther, Mordaunt Hall, Frank S. Nugent and Andre Sennwald.

Each volume is arranged chronologically. The original reviews, in their entirety, including any illustrations, are reproduced photographically. Date of publication, page and section of the issue are indicated. At the end of each yearly segment is appended a list of the ten best films as selected by *The New York Times*, the New York Film Critics Awards, and the "Oscars" bestowed by the Hollywood Academy of Motion Picture Arts and Sciences.

The volumes' contents cover the years as follows: Vol. 1–1913–1930; Vol. 2–1931–1938; Vol. 3–1939–1948; Vol. 4–1949–1958; and Vol. 5–1959–1968. The 6th volume, a thoroughly cross-referenced three-part index, offers considerable help for both scholarship and research. It lists (1) the title of the film; (2) the name of individuals connected with a given picture (director, writer, performer, etc.); (3) the name of the production company. The method used permits immediate tracing of an actor's career, a director's record, and other such data.

The special acid-free paper used assures an extended life span for this invaluable basic reference work.—*George L. George*, Directors Guild of America, 110 W. 57 St., New York, NY 10019.