

CONTENTS

LIST OF CONTRIBUTORS	v
FOREWORD	xiii
PREFACE	xv
CONTENTS OF VOLUME B	xxi

Electronography

A Technical Description of the Construction, Function, and Application of the U.S. Navy Electronic Camera. By G. E. KRON, H. D. ABLES AND A. V. HEWITT	1
Large-image Electronographic Camera. By R. W. DECKER AND H. MESTWERDT	19
Sur Quelques Progrès Récents Apportés à la Caméra Électronique à Focalisation Électrostatique et sur son Application en Physique et en Astronomie. By P. BIED-CHARRETON, A. BIJAOU, M. DUCHESNE AND J. M. LE CONTEL	27
Electronic Cameras for Space Research. By M. COMBES, P. FELENBOK, J. GUERIN AND J. P. PICAT	39
A High-resolution Image Tube for Integrated Circuit Fabrication. By T. W. O'KEEFFE AND J. VINE	47
Further Developments of the Spectracon. By J. D. MCGEE, D. McMULLAN, H. BACIK AND M. OLIVER	61
Cathode-ray Tube with Thin Electron-permeable Window. By Y. UNO, H. KAWAKAMI, H. MAEDA AND E. MIYAZAKI	81

Image Tubes

Cascade Image Intensifier Developments. By J. D. MCGEE, R. W. AIREY AND B. P. VARMA	89
A Family of Multi-stage Direct-view Image Intensifiers with Fiber-optic Coupling. By P. R. COLLINGS, R. R. BEYER, J. S. KALAFUT AND G. W. GOETZE	105
Some Aspects of the Design and Manufacture of a Fibre-optic Coupled Cascade Image Intensifier. By D. L. EMBERSON AND B. E. LONG	119
A Proximity-focused Image Tube. By M. J. NEEDHAM AND R. F. THUMWOOD	129
INTIC, an Image INTensifying, Integrating and Contrast-enhancing Storage Tube. By G. WENDT	137
A Light Amplifier with High Light Output. By W. BAUMGARTNER	151

Signal Generating Tubes

SEC Camera-tube Performance Characteristics and Applications. By G. W. GOETZE AND A. H. BOERIO	159
Some Properties of SEC Targets. By D. McMULLAN AND G. O. TOWLER	173
Newly Developed Image Orthicon Tube with a MgO Target. By Y. KAJIYAMA, T. KAWAHARA AND T. HIRAYAMA	189
Electrostatically Scanned Image Orthicon. By S. MIYASHIRO AND S. SHIROUZO	191
The Development of Image Isocons for Low-light Applications. By P. D. NELSON	209
Dynamic Imaging with Television Cameras. By H. ANDERTON AND R. R. BEYER	229
Beam-discharge Lag in a Television Pick-up Tube. By L. J. V. D. POLDER.	237
A 13-mm All-Electrostatic Vidicon. By J. WARDLEY AND F. W. JACKSON.	247
An Infra-red Sensitive Vidicon With a New Type of Target. By H. HORI, S. TSUJI AND Y. KIUCHI	253
Recherche d'un Dispositif Nouveau de Télévision Thermique. By F. LE CARVENNEC	265
Un Tube de Prise de Vues Sensible aux Rayons X. By M. BLAMOUTIER.	273
Adjustable Saturation in a Pick-up Tube with Linear Light Transfer Characteristic. By J. H. T. VAN ROOSMALEN	281
Measurement of TV Camera Noise. By A. S. JENSEN AND J. M. FAWCETT.	289
An Electromechanical Picture Signal Generating Device. By A. BOKSENBERG AND A. C. NEWTON	297
Effects of Caesium Vapour upon the Target Glass of Image Orthicons. By M. HIRASHIMA AND M. ASANO	309

Photocathodes and Phosphors

Research on Photocathodes in Czechoslovakia. By M. JEDLIČKA	323
Crystal Structure of Multialkali Photocathodes. By T. NINOMIYA, K. TAKETOSHI AND H. TACHIYA	337
Some Properties of the Trialkali Sb-K-Rb-Cs Photocathode. By M. DVOŘÁK	347
Decay of S-20 Photocathode Sensitivity Due to Ambient Gases. By R. W. DECKER	357
A New Technology for Transferring Photocathodes. By P. DOLIZY AND R. LEGOUX	367
Improvements to Photocathodes for Pulse Operation. By B. R. C. GARFIELD, J. R. FOLKES AND B. T. LIDDY	375
Some Getter Materials for Caesium Vapour. By M. HIRASHIMA AND M. ASANO	381
New Approaches to Photoemission at Long Wavelengths. By P. SCHAGEN AND A. A. TURNBULL	393
Gallium Arsenide Thin-film Photocathodes. By C. H. A. SYMS	399

Étude de l'Émission Photoélectrique des Structures Métal-Isolant-Métal. By P. VERNIER, P. HARTMANN, G. NIQUET AND M. TEPINIER.	409
Interference Photocathodes. By D. KOSSEL, K. DEUTSCHER AND K. HIRSCHBERG	419
The Development and Application of Interference Photocathodes for Image Tubes. By W. P. RAFFAN AND A. W. GORDON	433
Image Intensifier System Using Reflective Photocathode. By J. H. M. DELTRAP AND A. H. HANNA	443
Scintillation Processes in Thin Films of CsI(Na) and CsI(Tl) due to Low Energy X-Rays, Electrons and Protons. By C. W. BATES, JR.	451
Quelques Aspects des Essais de Dépôt de Photocathodes S-20 et d'Écrans Fluorescents sur Fibres Optiques. By S. VERON	461

Channel Multipliers and Secondary Emissions

Channel Multiplier Plates for Imaging Applications. By B. W. MANLEY, A. GUEST AND R. T. HOLMSHAW	471
An Analysis of the Low-level Performance of Channel Multiplier Arrays. By W. M. SACKINGER AND J. M. JOHNSON	487
Quelques Problèmes Concernant les Multiplicateurs Canalisés pour Intensificateur d'Image. By G. ESCHARD AND J. GRAF	499
Effects of Vacuum Space Charge in Channel Multipliers. By W. M. SACKINGER AND J. M. JOHNSON	507
Statistics of Transmitted Secondary Electron Emission. By W. L. WILCOCK AND D. E. MILLER	513

Electron Optics

Two Methods for the Determination of the Imaging Properties of Electron-optical Systems with a Photocathode. By V. JAREŠ AND B. NOVOTNÝ.	523
Computation of Imaging Properties of Image Tubes from an Analytic Potential Representation. By F. SCHAFF AND W. HARTH	535
The Design of Electrostatic Zoom Image Intensifiers. By J. VINE	537
Electron Optics of a Photoconductive Image Converter. By M. E. BARNETT, C. W. BATES, JR., AND L. ENGLAND	545