CONTENTS

i

LIST OF CONTRIBUTORS	•					v
PREFACE	•					xiii
ABBREVIATIONS .				•		xiv
CONTENTS OF VOLUME B	•	•		•		xix

Image Tubes and Channel Multipliers

Proximity Focused Image Intensifier with GaAs Photocathode. By	
B. R. HOLEMAN, P. C. CONDER AND J. D. SKINGSLEY	1
Developments in Proximity Focused Diode Image Intensifiers. By B. R. C.	
GARFIELD, R. J. F. WILSON, J. H. GOODSON AND D. J. BUTLER	11
Low Noise Proximity Focused Image Intensifiers. By H. POLLEHN,	
J. BRATTON AND R. FEINGOLD	21
A Colour Image Intensifier System for Night Vision. By H. MULDER	33
Improvements to an Image Intensifier for a Gamma-ray Scintillation	
Camera. By B. DRIARD, G. ROZIERE, L. F. GUYOT AND M. VERAT	41
Photochron II: An Image Tube for Sub-picosecond Chronography.	
By P. R. BIRD, D. J. BRADLEY AND W. SIBBET	51
Grid Shuttered Image Converter Tube in Nanosecond Operating Mode.	
By L. DIAMANT	59
The Oblique Image Converter. By C. B. JOHNSON AND K. L. HALLAM	69
Image Intensifier Tubes with New Very Simple Electron Optics. By	
R. EVRARD.	83
Some Applications of Microchannel Plates to Electronic Imaging Devices.	
By G. R. CARRUTHERS, J. KERVITSKY AND C. B. OPAL.	91
A Microchannel Plate with Curved Channels: An Improvement in Gain,	
Relative Variance and Ion Noise for Channel Plate Tubes. By	
J. P. BOUTOT, G. ESCHARD, R. POLAERT AND V. DUCHENOIS.	103
Space Charge in Channel Multipliers. By W. BAUMGARTNER AND B.	
GILLIARD	113
Impulse and Frequency Response of Channel Electron Multipliers.	
By K. Oba and H. Maeda	123
Signal to Noise and Collection Efficiency Measurements in Microchannel	
Wafer Image Intensifiers. By G. ESCHARD, J. GRAF AND R. POLAERT	141
Secondary Electron Emission and Compositional Studies on Channel Plate	
Glass Surfaces. By G. E. HILL	153
Changes in Secondary Electron Yield from Reduced Lead Glasses.	
By A. Authinarayanan and R. W. Dudding	167

Camera Tubes and Targets

Α	Small	Hig	h-Pr	ecision	Elec	etrostat.	ic	Pick-up	Tube.		By	W.	М.	VAN	
	ALPH	IEN		•			•			•				•	183

TV Camora Tube with a Callium Arconide Target By H BOUGFOT	185
I v Camera Illow with a Gamun Arsenue Talget. Dy II. ROUGLOI	100
M De commente de la comme Commente de la commente d	901
M. BLAMOUTIER	201
A Large Diameter X-ray Sensitive Vidicon with Beryllium Window. By	000
Y. SUZUKI, K. UCHIYAMA AND M. ITO	209
Properties of the Detector System for the International Ultraviolet	
Explorer Satellite. By K. G. R. Allen, B. E. Anderson,	
A. Boksenberg and M. B. Oliver	223
Photometric Statistical Performance of the SEC Target. By P. ZUCCHINO	239
Characteristics of an Optically Scanned SEC Device. By A. CHOUDRY	253
Measurements of Point Source Sensitivity of Three High Gain Camera	
Tubes. By E. W. Rork, M. R. ST. JOHN, P. L. MANLY AND K. E.	
KISSELL	263
An Electron Beam Readout Technique. By R. E. RUTHERFORD, JR.	279
High Resolution Electron Microscope Imaging with Silicon Diode Array	
Target Vidicons. By H. Alsberg and R. E. HARTMAN .	287
Pyroelectric Materials for Operation in a Hard Vacuum Pyroelectric	
Vidicon, By R. WATTON, G. R. JONES AND C. SMITH	301
Thermal Diffusion Limitations of the Resolution of a Pyroelectric Vidicon.	
By A L. HARMER AND W. M. WREATHALL	313
Some Properties of Evaporated and Spraved CdSe Lavers for Hetero-	
junction Vidicon Targets, By M. JEDLIČKA, B. LADMAN, O. VITOVSKÝ.	
D I Eday AND I Spp	323
A Uniform CdS. CdTo. As So. Hotorojunation Target for TV Camera Tubes	
Dr. M. Nogawa S. Owawara and P. Nigupa	335
By M. NOGAMI, S. UKAMOTO AND N. NISHIDA.	500
Antimony Trisulfide Heterojunction visicon Structures. By C. K.	240
WRONSKI AND A. D. COPE	349
Near Intrared Camera Tube Studies with an Ag ₂ S Target. By H. ROEHRIG,	905
P. Aceto, S. Mardix, P. M. McIlvaine and S. Nudelman	305

Photocathodes and Electron Emission

Gallium Indium Arsenide Photocathodes. By C. PIAGET, R. POLAERT	
AND J. C. RICHARD	377
Thermionic Emission from Negative Electron Affinity Silicon. By J. R.	
HOWORTH, R. HOLTOM, C. J. R. SHEPPARD AND E. W. L. TRAWNY .	387
Quantum Yield of Cs ₃ Sb Photocathodes as a Function of Thickness and	
Angle of Incidence. By W. GRESCHAT, H. HEINRICH AND P. RÖMER	397
Photoelectronic Device Development and Related Research at B.A.R.C.	
By T. B. BHATIA, G. K. BHIDE, C. GHOSH, G. N. KELKAR, M.	
SRINIVASAN, B. P. VARMA AND R. L. VERMA	409
A Simple Photocathode Transfer System. By C. F. VAN HUYSSTEEN	419
Residual Gases and the Stability of Photocathodes. By D. McMullan	
AND J. R. POWELL	427
The Effects of High Electric Fields on Photocathodes. By J. A. COCHRANE	
AND R. F. THUMWOOD	441
Wavelength Dependent Resolution in the Far Ultraviolet for Proximity	
Focused Imaging from a Caesium Telluride Photocathode. By K. G. R.	
ALLEN, B. R. ANDERSON, A. BOKSENBERG AND D. G. ROSS	449

CONTENTS

xvii

S.I	Photocathode Response, Linearity and Dynamic Range with Pico-	
	second 1.06 µm Laser Pulses. By S. W. THOMAS, G. R. TRIPP AND	
	L. W. COLEMAN	451
The	Negative Electron Affinity GaAsP Cold Cathode Silicon Vidicon. By	
	J. R. HOWORTH, R. K. SURRIDGE AND I. C. PALMER	463

Electron Optics

Some Problems of Electron Optical System Design Using a Computer.	
By V. Jareš and B. Novotny	473
A Method for Efficient Numeric Computation of Axially Symmetric Electro-	
static Fields in Image Tubes. By A. G. DU TOIT	485
An Image Tube for Experimental Electron Optics. By K. F. HARTLEY	
AND D. MCMULLAN	493
Asymmetrical Astigmatism of X-ray Image Intensifiers. By F. W.	
Lange and S. Schweda	507