

CONTENTS

Preface	v
Limits to the Energy Resolution and Spatial Resolution of X-ray Detectors for Astronomy	1
<i>G. W. Fraser</i>	
Microcalorimeters for High Resolution X-ray Spectroscopy	18
<i>E. Silver, S. Labov, T. Pfafman, Y. Wai, J. Beeman, F. Goulding, D. Landis, N. Madden, and E. Haller</i>	
Phonon and Quasiparticle Mediated Detection of X-rays and α -particles with Superconducting Tunnel Junctions	41
<i>H. Kraus, J. Jochum, B. Kemmather, M. Gutsche, F. von Feilitzsch, and R. L. Mössbauer</i>	
Non-linear Response of Superconducting Tunneling Junctions for X-ray Detection	63
<i>W. Rothmund and A. Zehnder</i>	
Series-connected STJ Detector with Large Sensitive Area	76
<i>M. Kurakado, A. Matsumura, T. Takahashi, S. Ito, R. Katano, and Y. Isozumi</i>	
Energy Resolved γ -ray Detection Using Tunnel Junction Arrays on Single Crystal Silicon	98
<i>D. J. Goldie</i>	
Optimum Signal Processing for Superconducting Tunnel Junction	110
<i>A. Alessandrello, C. Brofferio, D. V. Camin, O. Cremonesi, G. Gervasio, A. Giuliani, G. Pessina, and E. Previtali</i>	
Single Crystal Superconductors as X-ray Detectors	125
<i>N. E. Booth, R. J. Gaitskell, D. J. Goldie, C. Patel, and G. L. Salmon</i>	
Output Signal from X-ray Irradiated Nb-based Tunnel Junctions and Its Analysis on the Basis of the Coupled Boltzmann Equations	151
<i>K. Ishibashi, K. Mori, K. Takeno, T. Nagae, Y. Matsumoto, S. Takada, H. Nakagawa, and H. Akoh</i>	

Fabrication, Measurement, and Modeling of Epitaxial Niobium Tunnel Junction X-ray Detectors	165
<i>D. Van Vechten, M. N. Lovellette, C. Boyer, G. G. Fritz, S. E. King, K. S. Wood, G. Arnold, M. K. Blamire, J. E. Evetts, E. C. G. Kirk, and R. E. Somekh</i>	
Quasiparticle and Phonon Relaxation after Energy Deposition in Superconductors	196
<i>W. Rothmund</i>	
Superconductive Tunnel Junction Detector: The Linear Regime	209
<i>B. Ivlev, G. Pepe, and U. Scotti di Uccio</i>	
Detecting with the Intermediate State in Superconducting Sphere and Strips: A Study of the Magnetic Nucleation	220
<i>V. Jeudy, D. Limagne, and G. Waysand</i>	
Current Activities in Naples on Superconductive Particle Detectors	251
<i>R. Cristiano and S. Pagano</i>	