Contents

PREFACE	ix
INTRODUCTION	xiii
ONE/The Historical Origin of Thermonuclear Explosive Devices	
two/Thermonuclear Explosives	3
THREE/The Temperature and Energy Flux Occurring in a Fission Explosion	7
FOUR/The Fission Bomb as a Trigger	1 1
FIVE/The Ignition Problem	15
six/The Polyhedron Configuration	23
SEVEN/Ignition by Implosion with Only One Fission Bomb	27
EIGHT/Other Ignition Configurations	33
NINE/Multishell Velocity Amplification	37
TEN/Thermonuclear Detonation Waves	41
ELEVEN/Various Configurations to Reach Large Thermonuclear Yields	55
TWELVE/The Neutron Bomb	59
THIRTEEN/Autocatalytic Thermonuclear Detonation Waves	63

viii PHYSICAL PRINCIPLES OF THERMONUCLEAR EXPLOSIVE DEVICES	
FOURTEEN/The Question of Nonfission Ignition	79
FIFTEEN/Thermonuclear Microexplosions	9:
SIXTEEN/Thermonuclear Lenses and Shape Charges	117
SEVENTEEN/Some Recent Developments	125
EIGHTEEN/Ignition by a Fission Fizzle	137
REFERENCES	143

₩