

# PHYSICS WITHOUT EINSTEIN

BY

HAROLD ASPDEN

Doctor of Philosophy of Trinity College  
in the University of Cambridge

SABBERTON PUBLICATIONS

P.O. Box 35, Southampton, England

# Contents

<i>Foreword</i>	xi
<i>Introduction</i>	xiii
1 THE ELECTRON	
Electron Charge	1
What is an Electron?	1
The Electron in Motion	2
X-ray Scattering by Electrons	3
Magnetic Energy of the Electron	4
Electrostatic Rest Mass Energy of Electron	5
Electric Field Induction by Motion of Electric Charge	5
Is Magnetic Energy Negative?	7
Accelerated Charge	8
Superconductivity	14
The Velocity-dependence of Mass	16
Fast Electron Collision	17
Electrons and Positrons as Nuclear Components	18
Summary	22
2 MUTUAL INTERACTION EFFECTS	
Reaction Effects	23
Mutual Kinetic Energy	24
The Nature of Induced EMF	27
Magnetocaloric Effects	28
Evidence of Magnetic Reaction Effects	30
The Gyromagnetic Ratio	32
The Aether	36
Thermonuclear Reactor Problems	37
The Law of Electrodynamics	39
Summary	47

3	THE NATURE OF FERROMAGNETISM	
	Heisenberg's Theory	48
	The Cause of Ferromagnetism	49
	Stress Energy Analysis due to Orbit-Orbit Interactions in a Ferromagnetic Crystal Lattice	50
	Discussion of New Theory	55
	Summary	57
4	WAVE MECHANICS	
	Universal Time	58
	The Michelson–Morley Experiment	59
	The Principle of Equivalence	60
	Energy and Angular Momentum of Space–time	61
	Heisenberg's Principle of Uncertainty	63
	Space–time Spin Vector	64
	Planck's Radiation Law	64
	The Bohr Atom	68
	Electron-Positron Annihilation	69
	The Schrödinger Equation	70
	Photon Momentum	75
	Anomalous Electron Behaviour	76
	Summary	77
5	GRAVITATION	
	The Nature of Space–time	78
	Tests of Einstein's General Theory	80
	Mercury's Perihelion	83
	The Nature of Gravity	88
	Summary	94
6	SPACE–TIME ANALYSIS	
	Space–time Motion	95
	Electromagnetic Wave Propagation	99
	Balance in Space–time	106
	Space Polarization Energy	111
	Derivation of Planck's Constant	111
	Electron Mass	116
	The Muon	117
	Summary	123

7	NUCLEAR THEORY	
	Electron-Positron Creation	125
	Mass of Aggregations of Electric Charge	127
	The Deuteron Reaction	128
	Particle Inversion	130
	The Proton	132
	The Neutron	133
	The Origin of the Basic Nucleons	139
	Atomic Nuclei	145
	Nuclear Bonds	147
	The Pion	149
	Proton Spin	152
	Neutron Spin	156
	Deuteron Spin	158
	Electron Spin	160
	Summary	164
8	COSMIC THEORY	
	Geomagnetism	166
	Jupiter	170
	The Sun	171
	The Zodiacal Light	172
	The Solar System	174
	Quasars	177
	The Origin of Matter	178
	Derivation of Graviton Mass	181
	Perihelion Motions	184
	Summary	186
9	GENERAL DISCUSSION	
	Relativity	187
	Electromagnetic Energy Transfer	198
	The Nature of Spin	202
	Electrodynamics	206
	APPENDICES	
I	Electrostatic Energy and Magnetic Moment of Spinning Charge	209

II Magnetic Field Angular Momentum Analysis	211
III Magnetic Spin Properties of Space–time	214
REFERENCES	217
INDEX	221