

TABLE OF CONTENTS

1. INTRODUCTION.....	7
1.1 INTRODUCTION	7
1.2 AN APPROXIMATE DESCRIPTION OF REALITY	7
1.3 INTERPRETATION OF PHYSICAL PHENOMENA	8
2. CAUSE-AND-EFFECT RELATIONSHIPS OF INTERACTIONS	9
2.1 PHYSICAL OBJECTS	9
2.2 THE STRUCTURE OF PHYSICAL OBJECTS	9
2.3 THE ESSENCE OF INTERACTIONS	10
3. THE STRUCTURE OF SPACE.....	11
3.1 DISTURBANCES OF SPACE IN E^3	11
3.2 THE POSTULATE OF SOURCELESSNESS OF VECTOR FIELDS WHICH DESCRIBE INTERACTIONS	12
3.3 THE SOURCE REDUCTION RULE.....	14
3.4 VORTICES IN THE FOUR-DIMENSIONAL SPACE.....	20
3.5 VORTEX HYPERSURFACES	21
4. EULER EQUATIONS IN THE FOUR-DIMENSIONAL SPACE	31
4.1 EULER EQUATIONS IN THE FOUR-DIMENSIONAL SPACE	31
4.1 ANGULAR MOMENTUM IN THE FOUR-DIMENSIONAL SPACE.....	41
4.1 SPACE CHANNEL AT REST.....	50
5. THE NOTION OF TIME, MASS, AND ENERGY, AND THE LORENTZ TRANSFORMATION.....	52
5.1 THE NOTION OF TIME	52
5.2 PARAMETRIZATION OF DIFFERENTIAL MANIFOLD M^4 VS. UTTER TIME	55
5.3 THE LORENTZ TRANSFORMATION.....	56
5.4 THE PHYSICAL INTERPRETATION OF THE POSTULATE OF CHANGE OF THE ORIENTATION OF MIRROR SPACES	72
5.5 TRANSFORMATION OF VELOCITY	74
5.6 THE NOTIONS OF MASS AND ENERGY	79
5.7 GRAVITATIONAL INTERACTIONS.....	95
5.8 THE CURVATURE OF SPACE OF A SINGLE ASTRONOMICAL OBJECT...103	
5.9 THE GEOMETRY OF GRAVITATIONAL INTERACTIONS	116
5.10 THE PHYSICAL SENSE OF THE VECTOR OF ASYMMETRY OF MIRROR SPACES.....	123
5.11 THE PHOTON IN THE GRAVITATIONAL FIELD	134
5.12 THE RADIUS OF THE UNIVERSE	137

6. QUARKS	142
6.1. A SPACE CHANNEL MOVING IN UNIFORM MOTION	142
6.2. A SPACE CHANNEL MOVING IN UNIFORM MOTION – AN	
APPROXIMATION	150
6.3. INTERPRETATION OF ELECTRIC FIELD	158
6.4. ELECTRIC INTERACTIONS	161
6.5. INTERPRETATION OF MAGNETIC FIELD	162
6.6. THE LAGRANGE FUNCTION FOR A SPACE CHANNEL IN THE	
ELECTRIC AND MAGNETIC FIELDS	164
6.7. ELECTROMAGNETIC POTENTIAL	169
7. THE ESSENCE OF QUANTUM MECHANICS	180
7.1 PRECESSION OF A SPACE CHANNEL VS. DE BROGLIE WAVES	180
7.2 THE ESSENCE OF QUANTUM MECHANICS.....	184
7.3 ENTANGLED STATES.....	185
8. PRELIMINARY ANALYSIS OF WEAK AND STRONG	
INTERACTIONS	187
8.1 INTERACTIONS BETWEEN SPATIAL VORTICES	187
8.2 STRONG INTERACTIONS	190
9. SUPPLEMENT.....	194
9.1 LEPTONS AND THE STRUCTURE OF SPACE.....	194
9.2 MEASUREMENT OF THE NEUTRINO'S VELOCITY AT CERN	198
REFERENCES.....	204