Table of CONTENTS

Volume I

Part 1

Part 1a- Table of contents

Author request 1 Preface 1 Abstract 3 Table of content 6

Part 1a2-Introduction 15

1- Introduction 15

Part1b- Macrocosm 20

- 2- Mechanic of Macroscopic Objects 20
 - 2(1) Motion of a rigid body 20
 - 2(1)1 General aspect 20
 - 2(1)1a Preliminary step 20
 - 2(1)1b Delta Effect 22
 - 2(1)1c A proposed mechanism 27
 - 2(1)1d Right- and left-handed H particle-paths intrinsic spin as extra- dimensions 27
 - 2(1)2 Path constancy 28
 - 2(1)3 -Linear momentum and total energy 29
 - 2(1)4 Inertia of an H system 31
 - 2(2) Energy at its different figures 32
 - 2(2)1 General aspect 33
 - 2(2)2 The equivalence of mass and energy 34
 - 2(3) Length and time concept 35
 - 2(3)1 General aspect 35
 - 2(3)2 Discussion 38
 - 2(3)2a Dependence of time and length on H particle-paths path-length 38
 - 2(3)2b Space-time 40
 - 2(3)3 Time reversal symmetry 41
 - 2(4) Least action principle in respect to an isolated particle 41
 - 2(4)1 General aspect 41
 - 2(4)2 Path-length density 44
 - 2(4)2a- General aspect 44
 - 2(4)2b- Path-length density and the role of $\frac{S}{h}$ 45
 - 2(4)3 A step towards gauge theory 45
 - 2(4)4- Path-length characteristics 47
 - 2(4)4a- Types of path-length variation in different media 47
 - 2(4)4b- Reversible and irreversible kinds of path-length 48
 - 2(4)4c- Discussion 49
 - 2(5) Concept of interval on the basis of H particle-paths hypothesis 50

Part 1c- Paradoxes and Criticism 51

- 2(6) Paradoxes and criticism 51
 - 2(6)1 -Twin Paradox 51
 - 2(6)2 Inertial reference frame 51
 - 2(6)2a Relativity, inertia dependence 51
 - 2(6)2b Preferred reference frame 53
 - 2(6)2c Locally fixed reference frame 56
 - 2(6)2d H particle-paths viewed through an inertial reference frame 56
 - 2(6)2e The fourth time coordinates of CMPRF 56
 - 2(6)2f Absolute motion 57
 - 2(6)3 Fizeau's Test and SRT 58
 - 2(6)4 Sagnac Effect 58
 - 2(6)4a General aspect 58
 - 2(6)4b Explanation of the Figure 2(5) 60
 - A) Viewed from the lab frame as detector (source on round table) 60
 - B) Viewed through the round table rotating frame 62
 - C) Viewed outside the round table (the lab as source and detector) 62

1a1

```
2(6)4c – Rotating ring-like beam in Sagnac Experiment 62
       2(6)5- Discussion 65
         2(6)5a- General Aspect 65
         2(6)5b - Effect of \gamma^{-1} Contraction Factor 65
        2(6)5c- Sagnac test interpretations 66
   2(7) - Pseudo-particles 67
   2(8) – CMPRF's observer scenario in an isolated mass-bodies system 68
       2(8)1 – General aspect 68
       2(8)2 - In the frame-Out of the frame 68
      2(8)3 - Discussion 69
   2(9) - Forwarding and backwarding time intervals 69
   2(10) - Approaching or receding binary inertial reference frame systems 70
      2(10)1 - Non reversible single direction H particle-paths H system 70
      2(10)2 - Reversible H particle-paths H system 73
      2(10)3 - Discussion 74
Part 2
Part 2a- Microcosm 76
3- Mechanic of Microscopic Objects 76
   3(1) - Motion of fundamental particles (Compton Effect) 76
      3(1)1 - General aspect 76
      3(1)2 - Counter-currency mode of motion of negapa and posipa 80
   3(2) - Study of H particle-paths of an H system (e.g. electron) 84
   3(3) - Constancy of the total path-limit \Gamma 85
Part 2b- Electromagnetism 87
4- Electromagnetism 87
   4(1) - Introduction 87
   4(2) - Mechanism of motion 87
   4(3) - Interaction of two moving charged H systems 88
     4(3)1 - General aspect 88
          A) Preliminary step 89
          B) Electron structure according to Fig. 4(4) 89
          C) Electromagnetical expandons 96
         D) Magnetic flux quantum 97
     4(3)2 - Discussion 97
     4(3)3 - Spin dependence of field interactions 98
     4(3)4 - Photon spin 100
   4(4) - Photon regarded as a moving H system 100
   4(5) - Interaction of two charges at rest 102
   4(6) - Electric charge and its interaction 105
      4(6)1- General aspect 105
      4(6)2 -Matter wave frequency relationship of a charged particle with that of the related emitting photon in a external electrical field 108
      4(6)3 - Vector potential from viewpoint of H particle-paths hypothesis 109
      4(6)4 – Negatons and positons as expanding potential spheres 110
      4(6)5 – Virtual Particles 111
        4(6)5a – General aspect 111
        4(6)5b – Virtual photon 112
    4(6)6- Speed of electromagnetical interactions 112
   4(7) - Concept of electrical charge and electromagnetic interactions 113
 Part 3
 Part 3a-Gravitation 115
 5-Gravitation 115
   5(1) - General aspect 115
      5(1)1 - Scope 115
      5(1)2 - Dark matter 116
  5(2) - Mass - Field interaction 117
```

- - 5(2)1 General aspect 117
 - 5(2)1a Gravitational dome 118
 - 5(2)1b Equilibrium stage 119
 - 5(2)1c Gravitomagnetism from viewpoint of H particle-paths hypothesis 122
 - A) General aspect 122

7 1a1

```
B) Discussion 122
            C) Contracton 124
             C1) General aspect 124
             C2) Contracton and geon comparison 126
              C3) Kind of contractons 128
      5(2)1d – Speed of gravity 128
            A) General aspect 128
              A1) Preliminary step 128
              A2) An H particle-paths hypothesis interpretation based on experimental results 129
            B) Non aberrative gravitational potential field 129
            C) Discussion 131
            D) Gravitational cone-like cavities 132
      5(2)1e- Curved space-time from viewpoint of H particle-paths hypothesis 133
    5(2)2 - Mass levitation in an external gravitational field 133
    5(2)3 - Falling of a mass in the external gravitational field 134
5(3) - Inertial mass - Gravitational mass 135
    5(3)1- General aspect 135
    5(3)2 – An interpretation of identity of inertial and gravitational masses based on H particle-paths hypothesis 136
5(4) - Expanding spheres (or closed surface) 137
 5(4)1 - General aspect 137
 5(4)2 – H particle-paths motion on gravitational sphere 138
 5(4)3 - Aether drag 139
 5(4)4 - H particle-paths of a field in a moving medium (Fresnel drag) 140
 5(4)5 - Some results due to expanding gravitational surfaces and H particle-paths behavior in vacuum space 141
Part 3b- Mater and wave 144
5(5) - Big Bang Remnants 144
    5(5)1 - Primordial Expanding spheres remnant 144
    5(5)2 –Cosmic microwave background remnant 144
5(6) – Matter-wave 146
  5(6)1- Preliminary aspect 146
  5(6)2- Dual gravitational and electromagnetical aspects of de Broglie wave 148
  5(6)3- Wave-like motion of H particle-paths in a medium 148
  5(6)4- Matter wave speed scenario 149
 5(7)1-Total number of H particle-paths on a potential sphere 149
```

- 5(7) Black hole 149
- 5(7)2 General aspect based on H particle-paths hypothesis 150
- 5(7)3 Information lost puzzle 151
- 5(7)4 H particle-paths arrangements on the event horizon 152
- 5(7)5 An interpretation based on bi-Universes hypothesis 153
- 5(7)6 Black hole entropy 153
- 5(7)7 Black hole discreteness scenario 155
- 5(7)8- Black hole in the stellar clusters and normal galaxies 156
- 5(7)9- Self-accelerating particles 158
- 5(8) Planck and Schwarzschild scales 158
 - 5(8)1 Preliminary step 158
 - 5(8)2 The maximum density referred to a mass 160

Part 3c- Gravitational Interactions 161

- 5(9) Gravitational interaction at macroscopic case 161
- 5(9)1 Falling of a rigid body 161
 - 5(9)2 Discussion 161
 - 5(9)3 Two orbiting masses correlation 162
 - 5(9)3a General aspect 162
 - 5(9)3b Mach's principle 163
 - 5(9)3c Correlation between two mass-bodies and field variations 164
 - 5(9)3d Path-length of orbiting mass-bodies 164
 - A) Path-length of mass-bodies 164
 - B) Path-length of gravitational fields 165
 - C) Common H hall package tunnel 166
 - D) Recurrence of events (proposal) 167
 - 5(10)- Gravitational interaction at microscopic case 169
 - 5(10)1 Bending of light beam in a gravitational field 169
 - 5(10)2 Falling of a fundamental particle 171
 - 5(11)- The gravitational fields' configuration 172

8 1a1

```
5(12) - Spaceman story (optional) 172
   5(13) - Equivalence principle from point of view of H particle-paths considering Section 5(12) 173
   5(14) - A man on a planet 174
   5(15) - The first law of Newton must be modified? 174
     5(15)1 – General aspect 174
     5(15)2 – Dark Energy 175
        5(15)2a- Dark matter conversion to dark energy 175
        5(15)2b- Accelerated expanding Universe 177
        5(15)2c- Lambda vacuum 178
        5(15)2d- Universe evolution at reversed handedness 179
     5(15)3- The fate of the Universe 180
        5(15)3a- Spontaneous inflation during Big Bang 180
       5(15)3b- Contraction after expansion 180
       5(15)3c- The Big Crunch 183
       5(15)3d- Imprinted existence of entities during Universe evolution 184
           A) General aspect 184
           B) Proposed mechanisms in cyclic universe 185
        5(15)3e- The entire universe as a single object 191
           A) Wave function of the Universe 191
           B) Total path-length of the entire universe 192
           C) Total energy of the entire universe 192
           D) If there is more than one Universe? 191
           E) Horizon of expanding universe 193
5(15)3f- Our Universe as superimposition of parallel universes 193
 Volume II
   Part 3d- Force carrier particles 195
   5(16) - Wave-like structure of gravitational field 196
      5(16)1 - General aspect 196
        5(16)1a - Preliminary step 196
            A) Introduction 196
           B) Expandons behavior through gravitational field 202
           C) Particle red-shifting 203
         5(16)1b – Gravitational field from view point of H particle-paths hypothesis 204
            A) Explanation of the Figure 5(8) 204
            B) Gravitational radiation 213
            C) Ratio factor A 215
            D) A proposed skin growth mechanism simulation of expansion of gravitational surfaces (or expandons) 215
            E) Time's arrow increment due to a gravitational field 215
            F) Time's arrow, T-symmetry and potential scenario in levels of gravitational spheres 215
             F1) Time on the level of gravitational spheres 215
             F2) Potential transformation 216
           G) Mechanism of field propagation 217
              G1) General features 216
             G2) Wave function of an expandon 217
         5(16)1c - Discussion 218
           A) - General aspect 218
             A1 – None accelerating state 218
             A2 – Accelerated state 221
             A3 – Expandon and Graviton 222
             A4 – Gravitational time unit 223
          B) - Limiting conditions 223
          C) – Background time 223
         5(16)1d – Electromagnetism and gravity 224
          5(16)1e – Delta Effect and path constancy in gravitational field 225
       5(16)2 - Singularity at event zone 226
          5(16)2a – General Aspect 226
            A) Preliminary steps 226
            B) Comparison of the deviation degree from reversibility and cosmological factor 229
          5(16)2b – Expansion from viewpoint of H particle-paths hypothesis 230
```

5(16)2c – Gravitational refraction 231 A) - General aspect 231

C)- Virtual gravity due to accelerating motion 234

9 **1a1**

B) - Internal H particle-paths geometrical shape of a particle, or, mass-body through gravitational field 234

Part3e- Discreteness 236

5(16)3 - H hall quantized package 236

5(16)3a - General aspect 236

5(16)3b - Vacuum space quantized texture 239

- A) Preliminary step 239
- B) Particle track texture through vacuum 240
- C) Effect of inertia on the trajectories of particle and mass-bodies through vacuum texture 243
- D) Geometrical shape 244
 - D1) General aspect 244
 - D2) Path-limit Γ , as a scale of vacuum texture medium 244
- E) Pair production in vacuum space 247
 - E1) Preliminary step 247
 - E2) Axion-like particle generation scenario 247
- F) Constancy of light speed in normal vacuum 248
 - F1) Normal vacuum texture excluding gravitational field 248
 - F2) Normal vacuum texture including gravitational field 249
 - F3) Normal texture formation via gravitational field 249
- G) Quantized texture behavior at micro-world 249
- H) Individual vacuum quantized spatial texture 249
- I) Track texture dependence to the deBroglie matter wave 250
- J) Track texture and spacetime comparison 250
- 5(16)3c Vacuum energy density 251
- 5(16)3d -Vacuum background energy 252
- 5(16)3e Concept of distance and time in vacuum medium 253
- 5(16)3f Photon travel through space 254
 - A) General aspect 255
 - B) Retarded and advanced waves scenario 254
- 5(16)3g Path-length of an H hall quantized package 255
 - A) General aspect 255
 - B) Path-length variation of an H system 257
 - C) Particle motion from viewpoints of string theory and H particle-paths hypothesis 257
- 5(16)3h Abstract vacuum 258
- 5(16)3i Vacuum polarization from viewpoint of H particle-paths hypothesis 258
- 5(16)4 Electric permittivity and magnetic permeability as two characteristics of H hall quantized package 259
- 5(16)5 Spirally expanding gravitational surface 262
- 5(16)6 CPT Scenario 263

Part 3f-Time 265

- 5(16)7 Arrow of time 265
 - 5(16)7a General aspect 265
 - 5(16)7b Time's arrow dependence to deviation degree from reversibility α 266
 - A) General aspect 266
 - B) Superluminality scenario in a receding Universe 267
 - 5(16)7c Time's arrow categories 267
 - 5(16)7d Cosmological time's arrow 269
 - 5(16)7e Time arrow at quantum level 269
 - 5(16)7f Radiative time's arrow 270
 - 5(16)7g- Psychological time's arrow 270
 - 5(16)7h- Time perception 272
 - 5(16)7i- Time's arrow direction 272
 - 5(16)7j mono-directional time arrow 272
- 5(16)8 CP violation 273
 - 5(16)8a- General aspect 273
 - 5(16)8b Discussion 274
 - 5(16)8c Sub-unique H system 275
 - 5(16)8d Time's arrow dependence on interaction 275
- 5(16)9 bi-Universes hypothesis 276
 - 5(16)9a Right-handed and Left-handed Universe 276
 - 5(16)9b Handedness reversal 277
 - 5(16)9c Preference of matter respect to antimatter 279
 - 5(16)9d Entropy and arrow of time dependence 279
 - A)- General aspect 279
 - B)- Discussion 281
 - C)- Entropy increment in backward time 282

```
5(16)10 - Photon traveling through a barrier 282 5(16)11 - Path-lengths in different media 283
```

5(17) - Two successive gravitational spheres radii difference of proton in case of isolated hydrogen atom 284

5(18) - Pendulum and the Wall 287

Volume III

Part 4

Part 4a- Forces 288

6- Acting Force on Rigid Body 289 6(1) - Mass-body at rest (static) 289 6(2) - Mass-body at movement (dynamic) 290 6(2)1- Accelerating motion 290 6(2)1a- Collision 290 6(2)1b - External force 291 6(2)2- Discussion 292 6(2)3 - Mirror image effect 293 6(2)4 - Some kinds of interaction 295 A)- General aspect 295 B)- Interaction of irreversible and reversible path-lengths 295 6(2)4a - Electromagnetic radiation via impact 295 6(2)4b - Chaos theory from viewpoint of H particle-paths hypothesis 296 6(2)5 - Weak nuclear force 296

- A) General aspect 296
- B) W and Z Bosons 296
- 6(2)6 Force and Matter 297
- 6(2)6a What is the origin of mass and force? 297
- 6(2)6b Different forces from viewpoint of H particle-paths hypothesis 298
 - A) General features 298
 - B) Proposed mechanism of force application 299
- 6(2)6c- Higgs Bosons 299
- 6(2)6d- Superforce 300
 - A) General aspect 300
 - B) Grand unification of all the interactions 301

Part 4b- Quantum level 302

7- Heisenberg's relationships 302

```
7(1) - General aspect 302
7(2) - Discussion 305
```

- 7(2)1- General aspect 305
 - 7(2)2- Superposition scenario 306
 - 7(2)2a- General aspect 302
 - 7(2)2b- Stay time interval and superposition of quantum states 306
- 7(3) Limiting conditions 307
- 7(4) An interpretation of Heisenberg's relationships based on H particle-paths 308
 - 7(4)1 Preliminary aspect 308
 - 7(4)2 Discussion 310
 - 7(4)2a General aspect 310
 - 7(4)2b Electron bounded in atom 311
 - 7(4)2c A proposed mechanism 312
 - 7(4)2d- Entangled pair of particle measurement 313
 - 7(4)2e- A mechanism of particle-wave-duality 314
 - A) General aspect 314
 - B) Photon red-shifting 318
 - C) Doppler effect 319
 - 7(4)2f Particle stay time in an H hall package 320
 - A) Stay time in gravitational field 320
 - B) Indistinguishability scenario 322
 - C) Spontaneity from viewpoint of H particle-paths hypothesis 322
 - D) The increment of intrinsic gravitational field of a particle or a mass-body in an external gravitational field 323
 - D1) General aspect 323
 - D2) Equivalence principle scenario 324

D3) Clock rating 324
E) Mutual interaction of particles or mass-bodies with H hall packages of spatial medium 324
E1) General features 324
E2) Path-limit of a particle and related field during its motion in spatial medium 325
E3) Particles generation by mass-bodies and supermassif black holes in spatial 326

Part 4c- media 328

- 7(4)3– The media coefficient a dependence on medium from viewpoint of H particle-paths hypothesis 328
 - A) In the vacuum space medium of $\eta = 1$ 328
 - B) In the gravitational field medium 329

7(4)2h- Localization Problems 326

- C) In the slit gap medium 329
 - C1- General aspect 329
 - C2- Particle paths coherence 330
- D) In the mass medium 330
- E) Particle track texture medium 330
 - E1) In vacuum medium 331
 - E2) In potential well and rigid box media 332
 - E3) In particle's main-body medium 335
 - A) In atom's electron shell medium 335
 - B) In zero rest mass medium 336
 - E4) Discussion 336
- F) Abstract vacuum medium 337
- G) Path-length, and path-limit Γ in different media 337
- H) Numerical values for media coefficient a and path-limit Γ in different media 337
- I) Decrement of media coefficient a during the time 338
- J) The degree of right-, and left-handedness in different media 338
- K) Wave function 339
- 7(4)4- Motion of H particle-paths in a medium 339
- 7(5)- Reverson 341
- 7(5)1- Preliminary step 341
- 7(5)2- Reverson formation 341
 - 7(5)2a- General aspect 341
 - 7(5)2b-During an interaction 343
 - A) In microcosm 343
 - B) In macrocosm 344
- 7(5)3- Reverson characteristics 345
 - 7(5)3a- General aspect 345
 - 7(5)3b- Singularity aspect of reverson 345
 - 7(5)3c- Star formation from the microscopic dust particles (H hall packages contraction) 346
 - A) General aspect 346
 - B) A proposed mechanism 347
 - 7(5)3d- A proposed mechanism of mass submission 348
 - A) General aspect 348
 - B) Aggregated contractons 348
 - C) Boson formation 351
 - C1) During decay process and mass submission 351
 - C2) Mechanism of boson formation 351
 - D) Beat of gravitational sphere emission 352
 - E) Negapa and posipa increment during the Universe evolution 352
- 7(6) Energy-space-time correlation at quantum level 352

Part 4d- Wave function 354

8 - Wave Function and its square in quantum theory 354

- 8(1) Introduction 354
- 8(1)1 One particle in three spatial dimensions 354
- 8(1)2 Complex-Conjugate 355
- 8(1)3 State vector 356
- A) General aspect 357
- B) Spin half quantum states as vectors 358
- 8(1)4 Quantum state 358
- 8(1)5 Is wave function a real wave? 359
- 8(2) Particles trapped in potential well 359
- 8(2)1 Electron trapped in a potential well (one dimensional motion) 359
- 8(2)2 Particles in a closed rigid box 361

```
8(2)3 – Ground state and track texture of a particle 361
```

8(3) – Particle passing through the circular aperture and double slits 362

8(3)1- Electron fired through the circular aperture 362

8(3)2- Discussion 362

8(3)3 – Photon's diffraction track texture 363

8(3)4- Interference in double slit experiment 363

8(3)4a- General aspect 363

8(3)4b- Combined track texture formation 364

8(3)4c- Decoherence of combined track texture by thermal emission of photons 366

8(4) - EPR Paradoxes 367

8(5) - Unique H system 367

8(6) - An interpretation based on right- and left-handed H particle-paths 367

8(6)1 – Preliminary step 367

8(6)2 – H particle-paths interchanging 368

8(6)2a – General aspect 368

8(6)2b – H hall package interchanging with no effect at entanglement 369

8(6)2c – Interaction affecting entanglement due to measurement 369

8(7)- Entanglements of particles 369

8(7)1 – General aspect 369

8(7)1a- Between pair of particle 369

8(7)1b- In subsystems of a single particle 370

8(7)1c - Correlation from view point of H particle-paths hypothesis 371

8(7)1d- Decoherence 371

Part 4e- Reality 372

8(7)2 – Measurement from viewpoints of H particle-paths hypothesis 372

- A) Proposal 1 372
- B) Proposal 2 373
- C) Measurement according to bi-Universes hypothesis 373
- D) Time asymmetry in collapse of wave function 375
- E) Effect of inertia 376
 - E1) General aspect 376
 - E2) Stay time of a system during decoherence 376
 - E3) A proposed mechanism 377
 - E4) Appearance of randomness, and discreteness from viewpoint of HPPH 378
 - E5) Wheeler It & Bit Scenario 379
- F) Wave function evolution in different media 385
 - F1) The two media appearance in wave function 385
 - F2) Dependence of gravity and wave function evolution of an isolated particle in spatial medium 386
 - F3) The probability of finding of electron in a position (or state) 387
- G) Results and conclusions 387
- G1) General aspect 387
- G2) Discussion 388
- 8(7)3 Mass scenario based on H particle-paths hypothesis and Higgs theory 388
- 8(7)4 Quantum mechanical interpretation of H particle-paths hypothesis 389
- 8(7)5 de Broglie-Bohm theory, Standard quantum theory, and H particle-paths hypothesis comparison 391
- 8(7)6 Many particles system 393
 - A) Preliminary step 393
 - B) A proposed mechanism 393
 - C) A proposed transfer from multi-dimensional micro-world to spatially 3-dimensional macro-world 394
 - D) Measurement 395
 - D1) General aspect 395
 - D2) Mirror image effect scenario 395

8(8) – Quantum gravity theories, wave structure of matter theory and H particle-paths hypothesis comparison 397

8(8)1- Loop quantum gravity 397

8(8)1a- General aspect 397

8(8)1b- Quantization of spacetime 397

8(8)2 – String theory 398

8(8)2a- Theoretical Frameworks 400

8(8)3-Wave structure of matter theory 401

8(8)4- String theory and H particle-paths hypothesis 402

8(9) – Explanation of Figs. 8 402

8(9)1 – Fixed source, Fig. 8(1) 402

8(9)2 – Moving source, Fig. 8(2) 406

8(9)3 – Discussion 407

Part 5

Part 5a- Particles 410 9- Hydrogen Atom 410 9(1) - Electron momentum 410 9(2) - Electron spin in orbital 412 9(3) - Moving H system 413 9(3)1 - Hydrogen atom 413 9(3)1a – General aspect 413 9(3)1b – A proposed mode of photon emission and absorption by hydrogen atom 417 9(3)2 - Hydrogen molecule 418 9(4) - Magnetic dipole moment and angular momentum relationship 419 9(4)1 – Preliminary step 419 9(4)2 - Discussion 4209(4)3 – A proposed mechanism 421 9(4)4 – Path-length constancy of bounded electron in hydrogen atom 421 9(4)5- The effect of space quantized texture and vacuum texture 423 9(4)6– Fine structure constant from viewpoint of H particle-paths hypothesis 424 9(4)7- Explanation of Fig. 9(3)a 427 9(4)7a- General aspect 427 9(4)7b- Photon formation & absorption by an orbit e.g. of hydrogen atom 430 9(4)7c- A proposal of photon structure 431 9(5) - Electromagnetic rest mass 431

10-Particles 431

- 10(1) Combined H systems 431
- 10(2) Quarks and leptons 432
- 10(3) Charged pions 432
- 10(4) Quark's arrangement 433
 - 10(4)1 Proton's quarks arrangements 433
 - 10(4)2 Anti proton's quarks arrangement 435
- 10(5) Electron-neutrino arrangement 436
- 10(6) Lepton number 436
- 10(7) A strange suggestion 438
- 10(8) Particle axeon 438

11-Statistical behavior of H particle-paths 439

- 11(1) General aspect 439
- 11(2) Degree of expansion-contraction 440
- 11(3) Statistical temperature θ 441

Part 5b- Conclusions, References 443

12-Conclusion 443

13- References 446