

Nuclear Particle Calculation and Proton's Spectrum by Unified Theory

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Abstract

Using a unified mass (meg) we can calculate and explain the nuclear energies of proton particles, π^0 , W , The mass (meg) is related to Planck's mass, gravity and electricity. We explain the length 7,25 fermi of the proton's spectrum.

My articles : <http://www.cerglobal.org> , publishing listing , doctors

Introduction

We use the parameters of the following papers

meg = $4,66 \cdot 10^{-9} \cdot \text{kg} = 2,61 \times 10^{18} \cdot \text{GV/C}^2$ of 5.1a), function 108 of paper:
Electromagnetic interaction of gravity. Proposal for unified field theory.

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or <http://www.wbabin.net/science/alexandris.pdf>

$$m=e/k > 0$$

e : electron charge , K_e : Coulomb constant , $k = (G/K_e)^{1/2} = 8,6164 \times 10^{-11} \text{ C/Kg}$, G:
gravity constant , function (106) , $\pi=3.14...$, c: velocity of light , λ_{plank} : Planck length ,
h: Planck constant , l_e : length of charge $5.29 \times 10^{-11} \cdot \text{m}$, N_a : avogadro's number , k_b :
Boltzman's constant .

paper: <http://www.wbabin.net/science/alexandris5.pdf>

Main article

parameter: **6/7** from functions (2),(4),(18)

$$2\pi \cdot (6\text{meg}) \cdot c \cdot (l_e/N_a)/h = 6.986$$

$$137,3134 \cdot (6/7) \cdot \text{meg} = N_a \cdot m_e , m_e = \text{mass of electron}$$

Structure of proton

$$1/ap = 21,8 \text{ from functions (14),(15)}$$

$$E_{\text{plank}}/E_{\text{meg}} = 4,670113 = (1/ap)^{1/2}$$

$$ap/a = 2\pi \text{ or } ap = 2\pi \cdot a , a = 1/137,035$$

energy to be $1/ap = 21$: $E_0 = 0.8hc/(2\pi \cdot 1 \text{fermi}) = 159,82 \text{ MeV/C}^2$

$$3\mu = 2 E_0$$

$$K^+ = 3 E_0$$

$$(6/7) \cdot \eta = 3 E_0$$

$$(6/7) \cdot p = 5 E_0$$

$$(6/7) \cdot n = 5 E_0$$

$$\Lambda = 7 E_0$$

$$(6/7) \cdot \Xi^0 = 7 E_0$$

$$(6/7) \cdot \Xi^- = 7 E_0$$

$$(6/7) \cdot \Omega = 9 E_0$$

$$\pi^+ = (6/7) \cdot E_0$$

$$\pi^0 = (6/7) \cdot E_0$$

$$\text{Boson } W(\text{kg}) = (6/7) \cdot 100 \cdot m_p$$

m_p = mass of proton

	MeV/C ²	MeV/C ²	MeV/C ²
μ	105.7	0.85	106.5466667
τ	1784		
K^+	493.7	-14.24	479.46
K^0_s	497.7		
η	548.8	10.57	559.37
p	938.3	-6.02	932.2833333
n	939.6	-7.32	932.2833333
Λ	1115.6	3.14	1118.74
Σ^+	1189.4		
Σ^0	1192.5		
Σ^-	1197.3		
Ξ^0	1315	-9.80	1305.196667
Ξ^-	1321	-15.80	1305.196667
Ω	1672	6.11	1678.11
π^+	139.6	-2.61	136.9885714
π^0	135	1.99	136.9885714
Boson W(kg)	1.43326E-25	0.00	1.43368E-25

The last work was about nuclear particles. The limit of this method of work is the approximation of 1,14-1,16 that I named 7/6 . This approximation comes from Euclidian equations of angular momentum . If we use mole of particles and exponential equations we will have the approximation x/1000 and then we could know if 1,14 is 7/6.

We found 1,35fermi in approximation 1,14 , so $1,35/1,14=1,18 \approx 1,16=7/6$ and $1,16\text{fermi} \approx 5 \times 0,225\text{fermi}=1,125\text{f}$

From this approach it seems that we talk about the unified theory where the particles π^+ and boson have very good approximations, also we can see the number of particles $\eta, (p,n), \Xi, \Omega : 3, 5, 7, 9$ in order in an approximation of 0,8-1,5 %. The unified approach was obvious from the proton equations in the former papers.

In this paper we can see the lengths of the proton 0,225fermi, 1f, 1.23f, 1.35f and 1.41f that equalised to a dynamic $c^2/2$.

In the particle index, the energies come from the structure of the proton (coefficient 0,8), $6/7$ and a length of 1 fermi . The same results we can have in 1,072 fermi with 0,8 and without $6/7$, also in 0,9 fermi without 0,8 and $6/7$.

0,9 fermi $=4 \times 0,225$ fermi and 1,2 fermi $=6 \times 0,225$ fermi closed to dynamic of Paris. So we can have a list of lengths of the proton:

0.225f, 0.4f, 0.6f, 0.9f, 1.1f, 1.2f, 1.5f...

We can experimentally examine these lengths and particle approach .

proton structure $1/a_p=21,8$

$21,8/3=7,26$ this is equal to the coefficient of the nuclear spectrum function (like the Rydberg function)

$7,25/6,28 = 1,15 \approx 7/6$ or $2\pi/7,25 \approx 6/7$ this must be the natural matter of $6/7$

$7,25 \text{ fermi}/0,225 \text{ fermi}=32,2$

$32,2=2^5+0,2$ so in the same way of neutrino prediction we have the angular momentum:

$J=m.c.r=21,8.h \approx 3 \times 7,25=21,75 \approx 3 \times 2\pi.(7/6).h=21,98.h$

$J=mc.r = 3 \times 32,2 \times 0,225.h=21,73.h \approx 3 \times 2^5 \times 0,225.h=21,6.h$,

$r= nr_0$, $r_0=0,225\text{f}$, $n=r/0,225\text{f}$

proton structure is : $3 \times 2^5 \times 0,225$ with diverse 0,2

It remains an angular momentum of 0,2h and energy in length of 7,25fermi $0,20hc/l$: 44,4 MeV/c² and for one level energy: $44,4/21,8=2,1\text{MeV}/c^2$, using the method of neutrino prediction.

In the above we have seen :

1) The structure of proton constant : $0,225 \times 3 \times 2^5$

2) From the fine structure of the electron , the electron is divided into 5 parts and from the proton structure constant , the proton is divided into 3 parts

(journal : <http://www.wbabin.net/science/alexandris5.pdf>)

An interest calculation is that $21 \times 44,4.\text{MeV}/c^2 = 932\text{MeV}/c^2$, 21 is the number of the structure constant of the proton (21,8) This mass appears in the particle index .

What is 0,225fermi?

from the last discussion, journal : <http://www.wbabin.net/science/alexandris5.pdf> it arises that :

$L_p/n_p=2\pi.0,225\text{fermi}=1,41\text{f} =$

$10\pi.\text{meg}.\lambda_{\text{plank}}/m_p$, $n_p=1$ with 2π

also $2^5 \times 0,225 \text{ fermi} = 7,2 \text{ fermi} \approx 7,25 \text{ fermi}$

so $m_p \cdot 7,25f = 5 \times 2^5 \cdot \text{meg} \cdot \lambda_{\text{plank}}$

and $a \cdot m_p \cdot (7,25/2\pi) \text{ fermi} = (1/2\pi) \cdot (7/6) \cdot \text{meg} \cdot \lambda_{\text{plank}}$, $a = 1/137,035$ and we gave the hypothesis that $1/a = (6/7) \times 5 \times 2^5$

The approximation of this equation is 1 if Fermi is 0,993fermi

Also 1,072 fermi gives the particles in order $\eta, (p,n), \Xi, \Omega$: 3,5,7,9 in index particles

So the diverse or fermi is : $-0.007f + 1\text{fermi} + 0,07f$

The 0,993 fermi gives $E_0 = 0,8hc/(2\pi \cdot l) = 160,94 \text{ MeV}/c^2$, as in particle index arises energy of proton $(7/6) \times 5 \times 160,94 \cdot \text{MeV}/c^2 = 938 \text{ MeV}/c^2$

it seems that $7,25/2\pi = 7/6$ so $1/2\pi = 1/6,28$ must be a fundamental structure constant of space as fine structure and proton constant structure .

The geometry meets the material

The form of this constant must be :

$$2\pi = 2^5/5 - 0,12$$

0,12 gives an emission energy or particle

$$0,12 \cdot hc/lg$$

This must be the graviton in order to exist as Material in a point of space with Euclidian geometry .

A philosophical conclusion is that the Euclidian geometry is a limit conveyance and stable for material. The extension of the universe gives the free space for Material to exist in an Euclidian space as in our life .

END

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