1.0) Abstract

The strong force, within the proton, has been measured by Jefferson Laboratories [1], to about 7000 newtons. This paper proposes that Planck Force, Planck Pressure are manifestations of the properties of the Neutron and the Planck Sphere which is the building block of our Hubble Universe.

2.0) Calculations

The strong force, within the proton, has been measured by Jefferson Laboratories [1], to about 7000 newtons. This paper proposes that Planck Force, Planck Pressure are manifestations of the properties of the Neutron and the Planck Sphere which is the building block of our Hubble Universe. In "The Unit Strong Force in Sphere Theory Granular Space-time"[2] the unit Strong Force was found to be 6194.41 Newtons.

2.1) Peak Strong Force Area

The equation from "The Unit Strong Force in Sphere Theory Granular Space-time" [2]

$$F=\frac{1}{3}\frac{M_{pion}}{3}\frac{1}{3}\frac{r}{4}(2\pi)^2 f^2=6194.41 Newtons \qquad [1]$$

Where

M_{pion} is the mass of the pion

Compton Radius of Neutron $r=\frac{h}{cMn}$ [2]

Compton Frequency of Neutron $f=\frac{Mnc^2}{h}$ [3]

Plank Area $=1.641289*10^{-69}m^2$ [4]

The Peak Strong Force Area $=\frac{F}{PlanckArea}$ [5]

The Peak Strong Force Area$=\frac{6194.41}{1.641289*10^{-69}}=3.7741*10^{72}N/M^2$ [6]

2.2 Proton Pressure

If we look at the Planck Force and we divide by the Compton Area of the Neutron Pair, which would be the Compton Radius of the Neutron we come up with the following.

Proton Pressure= $\frac{ThePeakStrongForce}{NeutronArea}$ [7]

Proton Pressure= $\frac{1.2102954*10^{44}\,Newtons}{1.3195909*10^{-15}\,meters^{2}} = 6.95045*10^{73}\ Newtons/meter^{2}$ [8]

As found in "The Dirac Large Numbers Hypothesis" [3] we found that the value

$U = N^{0.5} = [\frac{2M_P\pi^3hc}{GM_N^3}]^{.5}$ [2] [9]

$U = [6.57014*10^{40}]^{0.5}$

$U = 2.56323*10^{20}$ [10]

We will use this value of "U" to calculate the actual Planck Pressure

Planck Pressure= $\frac{c^7}{U^2hG^2}$ [11]

Planck Pressure= $\frac{299792458^7}{[6.62607004*10^{-34}]*[2.56323*10^{20}]^2*[6.67408*10^{-11}]^2}$ [12]

Planck Pressure= $1.122357*10^{72}\,\frac{Newtons}{meters^2}$ [13]

3.0) Discussion

The value from equation 13 of $1.122357*10^{72}\,\frac{Newtons}{meters^2}$ when multiplied by

$2\pi^3\frac{Mp}{Mn}$

Is exactly the same value as equation 8 of $6.95045*10^{73}\ Newtons/meter^2$

$2\pi^3\frac{Mp}{Mn}\frac{1.122357*10^{72}}{6.95045*10^{73}}$ =1

When one looks at the Peak Strong force from Equation 6 of $= 3.7741*10^{72}\,N/M^2$

One sees the value from Equation 13 of $1.122357*10^{72}\frac{Newtons}{meters^2}$ to be exactly multiplied by $2\frac{massofPionplus/minus}{massofneutron}$

Since pressure must be equal all over, then perhaps our Hubble Universe is a Hubble Universe sized pion.

4.0 References

1. nature.com/articles/s41586-018-0060-z
2. http://vixra.org/pdf/1812.0030v3.pdf
3. http://vixra.org/pdf/1811.0478v1.pdf