THE FAR ELEMENTARY ANALYSIS

OF ATOMIC MATTER–2019

01-SCOPE OF THE PAPER:

Macroscopic Structures of the WORLDS could not be defined realistically by any Science unless the Elementary Entity of MATTER is analyzed in depths.

02-PROBLEM ANALYSIS:

1. Scientists have been struggling through centuries to explain the mega space structures such as; Black Holes, Galaxies(Universes) and the wide MULTIVERSE entity (with lots of universes in it). But how could we succeed in theorizing Mega STRUCTURES, without knowing the fundamentals of Elementary Atomic Chemistry directly related to Mega scale DYNAMICS?

2. The entity of VACUUM has been addressed and it's existence had almost been accepted apparently through centuries but neither **Physical** properties (such as **Density**, **Pressure**) nor **Chemical** properties such as (**Particle Structure**, and **Dynamic Interactions** etc.) had been addressed anywhere in the so far developed background art.

3. **BOUNDARY** of Atom has not been addressed in any of the so far developed Atomic Models to the best of my knowledge. (*Isn't that a problem for others when I was nearly dying for years struggling with this particular boundary problem*?). In my simplest logic, what has made **Photons** (light particles) reflect back unless there is a **Skin Boundary** for Atom?

4. **Gravity** doesn't attract **Vacuum** by its Mechanism and hence hasn't that the **Periodic Table** missed the mass of the **entrapped vacuum** in the **atomic bulb**?

03-THE FIVE DARING ASUMPTIONS FOR ADVANCEMENT:

1. **'MATTER' as a whole, is composed of PARTICLES**
2. **A 'PARTICLE' essentially possesses a substantial BOUNDARY**
3. **'VACUUM' is a particular Medium of Density and Pressure**
4. **'ENERGY' has no separate entity away from 'MATTER'**
5. **'HYDOROGEN' atom is created by expansion of a 'NEUTRON'**

Everything in WORLDS cannot be **Observed** or **Proven** practically in laboratories mainly because our best **Messenger-Light**'s capability is limited in to a narrow 3D-domain of **Linear Dynamics**.
Besides that Light is not a **trust worthy Messenger** for being undergone to many physical deformations on the way such as; **Reflection**, **Refraction**, **Diffraction**, **Red-shift** & **Blue-shift** etc.
(Never to forget that we are dealing with a SOLID MIRAGE created by Light and other incoming signals in face of the bodily given Five Sensory Organs).

Whence the Laboratory fails to get at the **Distant Realities** of NATURE, Scientists moreover tend towards '**Mind Exploration**' by enlightening **Wisdom** of the given 6th Sensory Organ-**Mind**.
Mind Exploration is composed with three main steps such as;

I. Creating of many Conceptual Models
II. Deduction by Logical Reasoning
III. Generalization of the best Selection by Case studies, Reduced practical and Mathematics. (*Mathematics is the digital representation of Logics*)

Therefore **Assumptions** and **Constants** are the **temporally fixed areas** by the **Explorer** to avoid the difficulty in handling many unknowns at the same time in the path of his Visionary Struggle.
(*But many Constants in a certain theory means the Founder plays a blind game, creating 'Things of Nouns' on his own*)

04-PRESSURE OF THE VACUUM MEDIUM:

- As per the 3rd Assumption; 'HYDOROGEN' atom is created by expansion of a 'NEUTRON' (the
- The reaction accounts for a big Volume Change against the Pressure of Vacuum medium and hence there should be a Work done to be considered in our analysis.
- Einstein's principle of 'Conservation of Energy' is a Universal Reality with no challenges and I am using it in the bellow furnished analysis.

Known data:

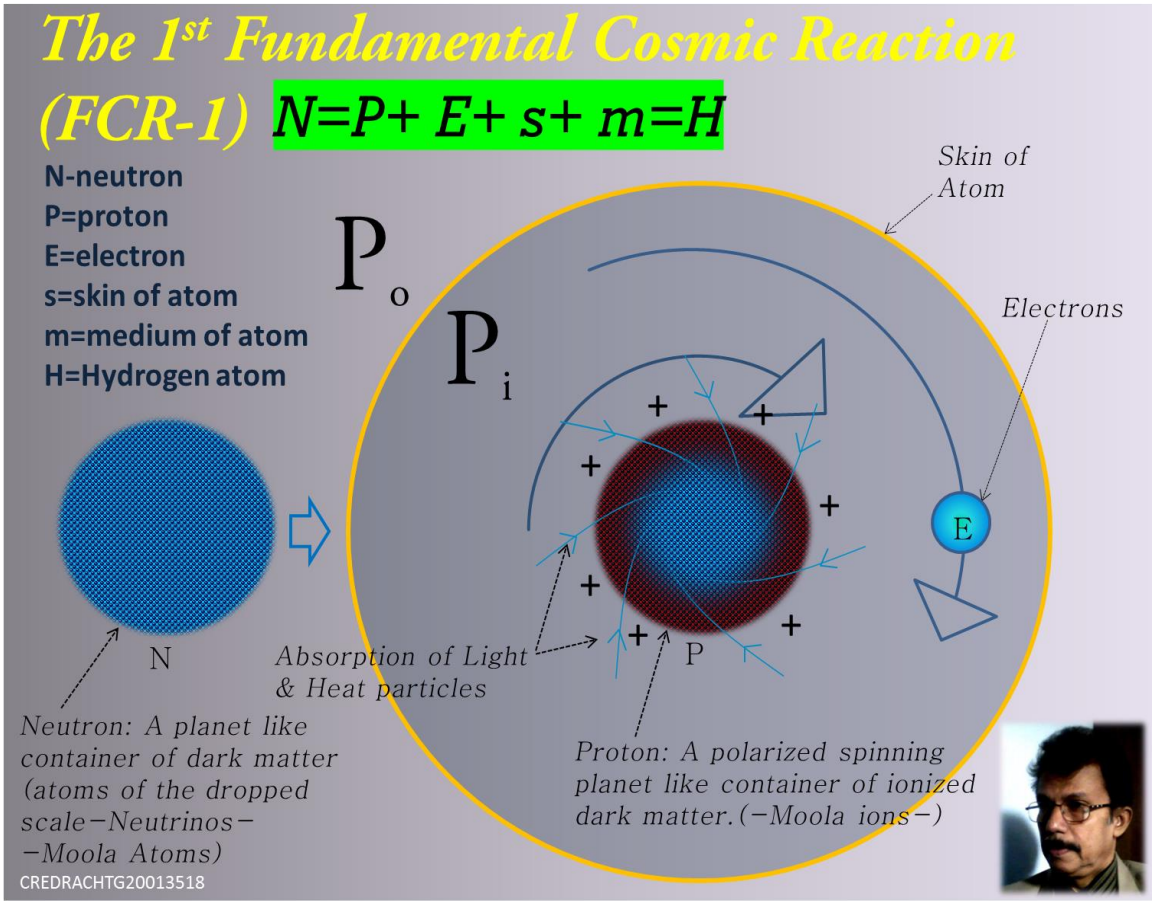
Mass of a Neutron:- $M_N = 1.675 \times 10^{-24} g$

Mass of a Hydrogen atom:- $M_H = 1.673 \times 10^{-24}$ g

Radius of Hydrogen atom $= 0.78 \times 10^{-8}$ cm ….

Volume of Hydrogen atom $V_H = {}^4/_3 \pi (0.78 \times 10^{-8})^3 cm^3$

Speed of light:- $c = 2.998 \times 10^{10}$ cm/s



Theory behind Calculations:

Conservation of Energy/Albert Einstein

Neutron is expanded in to **Hydrogen** in the fundamental phase transformation and the ultimate energy stock in both phases must be the same.

$$E_N = E_H$$

Ultimate energy stock in a Neutron = ultimate energy stock in Hydrogen atom

$$(M_N)c^2 = (M_H)c^2 + \text{Potential Energy}$$

$$= (M_H)c^2 + \textbf{\textit{Volumetric Energy}}$$

$$= (M_H)c^2 + PV_H$$

(let us substitute known values in the equation. P is the external medium pressure)

$$(1.675\text{-}1.673)\times10^{-24}\times(2.998\times10^{10}\ \text{cm/s})^2 = P[{}^4/_3\,\pi(0.78\times10^{-8})^3\text{cm}^3]$$

$$P = 1.79\times10^{-6} / (1.987\times10^{-24})$$

$$= 9.008\times10^{17}\ \text{dynes/cm}^2$$

*Pressure requirement to form **Hydrogen** by **Neutron**, **P = 9.008 x 10^{17} dynes cm^{-2}***

Note: Pressure inside of the Atom must be a bit bigger than that of outside, because of the tension of the skin membrane. Therefore it is assumed pressure inside is about double that of outside for easiness of calculations. Pi =1.8 x10^{18} dynes cm^{-2}
At the same time we have got to assume Density in the bulb too is doubled because Particle Density is directly proportionate to Pressure.

05-DENSITY OF THE VACUUM:

Density of the free space at the origin of Hydrogen from Neutron at the Black Hole in an Expanding Galaxy can be deduced by the Medium Relation $P= ½ ρc^2$; (*as abstracted from the monograph 'The Dynamic Model of Atom' published in 2017*)

****Medium Relation:-***

$P= ½ ρc^2$ where **ρ** is density of the medium, **P** is the pressure at stillness and **c** is the critical velocity of the medium. *[This relation is common for all the mediums including, air, water, solids etc. and **critical velocity** in any medium can be calculated if pressure and density is known.]*

Density of Vacuum Medium at where Hydrogen is born from Neutrons (Black Hole)

ρ =2(9.008 x10^{17} dynes cm^{-2}) / (2.998 x 10^{10}cm/s)^2=**0.002g/cm^3**

Density in the **Atomic Bulb** must be bigger than that of outer because of the tension of the skin membrane. Let's assume it to be doubled, **$ρ_i$ =0.004 g/cm3**.

06-AVAGADRO QUANTITY:

Electrochemical analysis as proven in the background Science (by weight reduction of a terminal in a copper accumulator against a measured electric flow) **A= 6.022 x 10^{23}**

07-ACTUAL ATOMIC MASS:

Actual Atomic Mass = Gravitational Mass + Mass of the Vacuum Bulb

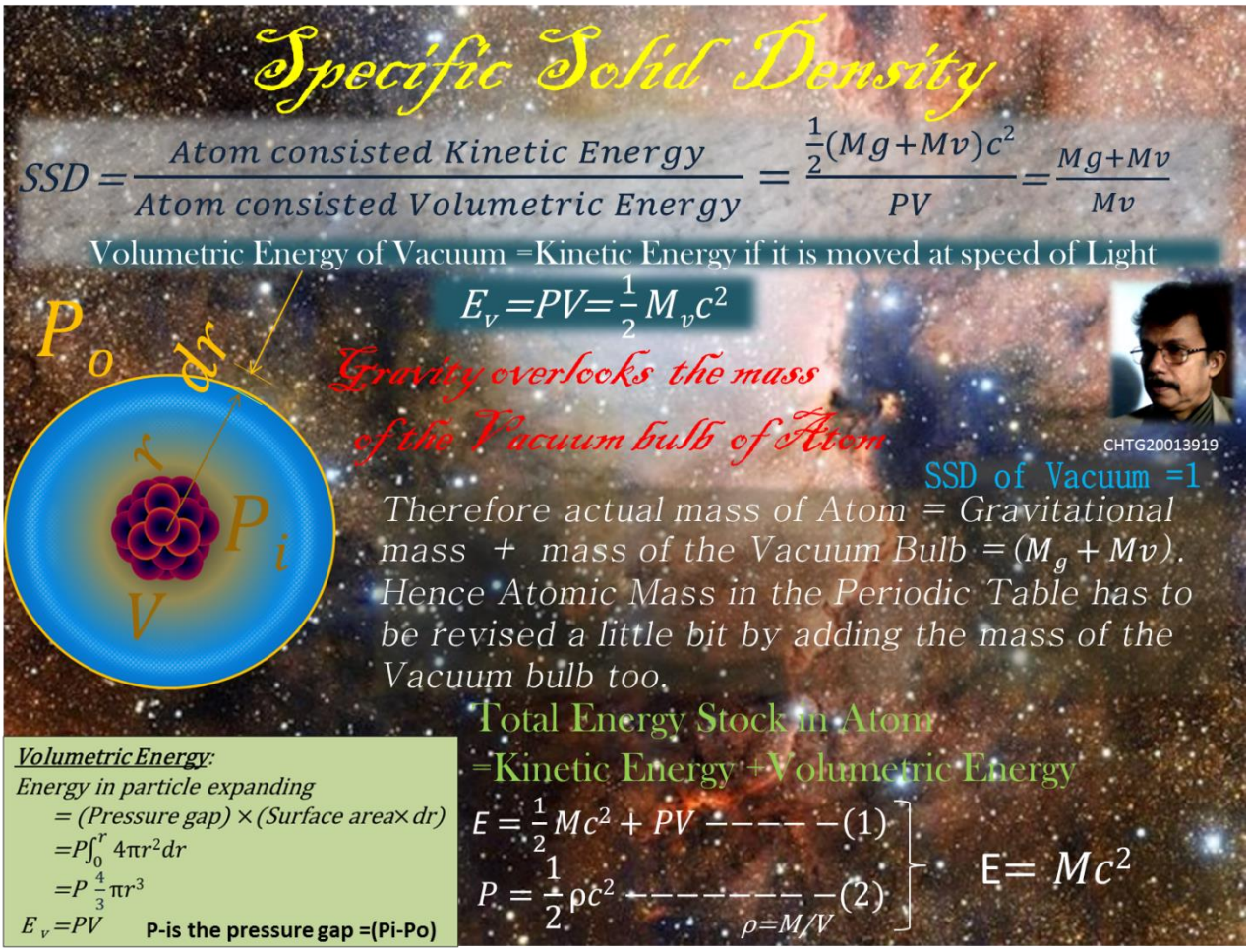
(*In the Gravitational Mechanism, mass of the Atomic Bulb is not participated and hence what is given in the Periodic Table has to be revised with added mass of the Vacuum bulb*).

08. SPECIFIC SOLID DENSITY OF ELEMENTS [SSD]:

Solidity of things cannot be sensed always by observation or through experimentation. For an instant Radon(atomic density =16.42g/cm3, SSD=4105) can float in the atmosphere being a Gas; while Water(density =1g/cm3, SSD=250) is flowing on the ground being a Liquid. But in our normal concern, isn't Gas lighter than Liquids? Therefore the measure of SSD would be of immense importance to decide what MATTER is really heavier and what is lighter.

Definition:

$$SSD = \frac{Particle\ Consisted\ kinetic\ energy}{Particle\ Consisted\ volumetric\ energy} = \frac{\frac{1}{2}(Mg+Mv)c2}{PV} = \frac{\frac{1}{2}(Mg+Mv)c2}{\frac{1}{2}(Mv)c2} = \frac{Mg+Mv}{Mv}$$



SSD is an essential measure of SOLIDITY in Elements, Particles, Materials or Objects as a whole relative to the VACUUM.

09. FACTOR OF NUCLEAR INSTABILITY (FNI):

FNI is the indicator of a Nuclear to observe how much away from the Stability.

FNI =Number of Neutrons / Number of Protons

FNI= 1 :- STABLE

FNI>1.5 :- UNSTABLE (radioactive)

10. TYPICAL REVISION FOR THE PERIODIC TABLE:

10. HYDROGEN:

Electron=9.108×10^{-28} g, Proton=1.672×10^{-24} g, Neutron= 1.675×10^{-24} g

Mp+Me=1.6729×10^{-24} g

- **Avogadro Quantity A=6.022×10^{23}**
- Atomic weight(practical)=1.008/A =1.674×10^{-24} g
- **Density of Vacuum ρ =0.004 g/cm3**
- **Number of Protons=1**

Gravitational Mass=M_g	Particle Radius R	Particle Volume V	Mass of Vacuum Bulb M_v =(0.004)V	Actual MASS =$M_g + M_v$	SSD $=\frac{Mg+Mv}{Mv}$	FNI $=\frac{Neutrons}{Protons}$
1.674×10^{-24} g	0.78×10^{-8} cm	1.987×10^{-24} cm3	7.948×10^{-27} g	1.682×10^{-24}g **1.013g/mole**	213	0

- **Actual Density of Hydrogen** = actual Mass/volume

  = 1.682×10^{-24} g/1.987×10^{-24} cm3

  =**0.846 g/cm3**;

- **Number of Neutrons** (nearest round up number)

  = [**Gravitational mass** - Mass of **1(Proton+Electron**)/Mass of **Neutron**

  ={(1.674×10^{-24} g)- 1(1.6729×10^{-24} g)}/(1.675×10^{-24} g)

≈ **0 :- no neutrons for Hydrogen**;

- **Factor of Nuclear Instability=Number of N/Number of P**

  NIF =0/1=0

11 HELIUM:

Electron=9.108×10^{-28} g, Proton=1.672×10^{-24} g, Neutron= 1.675×10^{-24} g

Mp+Me=1.6729×10^{-24} g

- **Avogadro Quantity A=6.022×10^{23}**
- **Atomic Mass= 4.002g**
- **Atomic Radius=1.28a**
- **Density of Vacuum ρ ≈0.004 g/cm3**
- **Number of Protons=2**

Gravitational Mass=M_g	Particle Radius R	Particle Volume V	Mass of Vacuum bulb $M_v = \rho V = (0.004)V$	Actual MASS $= M_g + M_v$	SSD $= \frac{Mg+Mv}{Mv}$	FNI $= \frac{Neutrons}{Protons}$
6.6456×10^{-24} g	1.28×10^{-8} cm	8.784×10^{-24} cm3	3.514×10^{-26} g	6.680×10^{-24}g **4.023g/mole**	190	1

- **Actual Density of Helium** = actual Mass/volume
  = 6.680×10^{-24} g/8.784×10^{-24} cm3
  =**0.760 g/cm3**;
- **Number of Neutrons** (nearest round up number)

  = [Gravitational mass-mass of 2(Proton+Electron)]/Mass of Neutron
  ={(6.645x 10^{-24} g)-2(1.6729 x 10^{-24} g)}/(1.675x10^{-24} g)
  =1.969 ≈2 (*mass has been lost from subatomic particles as **Energy** during the formation*)

- **Factor of Nuclear Instability=Number of N/Number of P**

  NIF =2/2=1(*Stable*)

12 CARBON

Electron=9.108 x 10^{-28} g, Proton=1.672 x10^{-24} g, Neutron= 1.675x10^{-24} g

Mp+Me=1.6729 x 10^{-24} g

- **Avogadro Quantity A=6.022 x 10^{23}**
- **Atomic Mass= 12.011g**
- **Atomic Radius=0.77a**
- **Density of Vacuum ρ =0.004 g/cm3**
- **Number of Protons=6**

Gravitational Mass=M_g	Particle Radius R	Particle Volume V	Vacuum mass M_v =ρV =(0.004)V	Actual MASS =M_g + M_v	SSD $=\frac{Mg+Mv}{Mv}$	FNI $=\frac{Neutrons}{Protons}$
1.994 x10^{-23} g	0.77 x10^{-8} cm	1.912 x10^{-24} cm3	7.648 x10^{-27} g	1.995 x10^{-23}g **12.012g/mole**	285	1

- **Actual Density of Carbon** = actual Mass/volume
  = 1.995 x 10^{-23} g/1.912 x 10^{-24} cm3
  =**<u>10.434 g/cm3</u>**;
- **Number of Neutrons**

  = [Gravitational mass-mass of 6(Proton+Electron)]/Mass of Neutron
  ={(1.994x 10^{-23} g)-6(1.6729 x 10^{-24} g)}/(1.675x10^{-24} g)
  =5.912≈<u>6</u> -(*mass has been lost during the formation*)

- **Factor of Nuclear Instability=Number of N/Number of P**

  <u>NIF =6/6=1</u> *(Stable)*

13 OXYGEN:

Electron=9.108 x 10^{-28} g, Proton=1.672 x10^{-24} g, Neutron= 1.675x10^{-24} g

Mp+Me=1.6729 x 10^{-24} g

- **Avogadro Quantity A=6.022 x 10^{23}**
- **Atomic Mass=15.999g**
- **Atomic Radius=0.66 a**
- **Density of Vacuum ρ ≈0.004 g/cm3**
- **Number of Protons=8**

Gravitational Mass=M_g	Particle Radius R	Particle Volume V	Mass of Vacuum bulb M_v =ρV =(0.004)V	Actual MASS =M_g + M_v	SSD $=\frac{Mg+Mv}{Mv}$	FNI $=\frac{Neutrons}{Protons}$
2.656 x10^{-23} g	0.66 x10^{-8} cm	4.189 x10^{-24} cm3	1.675x10^{-26} g	2.657 x10^{-23}g **16.000g/mole**	1586	1

- **Actual Density of Oxigen** = actual Mass/volume
  = 2.657 x 10^{-23} g/4.189 x 10^{-24} cm3
  =<u>6.343 g/cm3</u>;
- **Number of Neutrons** (nearest round up number)

  = [Gravitational mass-mass of 8(Proton+Electron)]/Mass of Neutron
  ={(2.656x 10^{-23} g)- 8(1.6729 x 10^{-24} g)}/(1.675x10^{-24} g)
  =7.866 ≈<u>8</u> -(*mass has been lost during the formation*)

- **Factor of Nuclear Instability=Number of N/Number of P**

  <u>NIF =8/8=1</u> (*Stable*)

14 IRON:

Electron=9.108 x 10^{-28} g, Proton=1.672 x10^{-24} g, Neutron= 1.675x10^{-24} g

Mp+Me=1.6729 x 10^{-24} g

- **Avogadro Quantity A=6.022 x 10^{23}**
- **Atomic Mass= 55.847g**
- **Atomic Radius=1.56a**
- **Density of Vacuum ρ ≈0.004 g/cm3**
- **Number of Protons=26**

Gravitational Mass=M_g	Particle Radius R	Particle Volume V	Mass of Vacuum bulb M_v =ρV	Actual MASS =M_g + M_v	SSD	FNI $=\frac{Neutrons}{Protons}$

			=(0.004)V		$=\frac{Mg+Mv}{Mv}$	
$9.274x10^{-23}$ g	$1.56\ x10^{-8}$ cm	$1.590\ x10^{-23}$ cm3	$6.360\ x10^{-26}$ g	$9.280x10^{-23}$g **55.886g/mole**	1459	1.11

- **Actual Density of Iron** = actual Mass/volume
  = 9.280×10^{-23} g/1.590×10^{-23} cm3
  =**5.836 g/cm3**;
- **Number of Neutrons** (nearest round up number)

  = [Gravitational mass-mass of 26(Proton+Electron)]/Mass of Neutron
  =$\{(9.274x\ 10^{-23}\ g)-26(1.6729 \times 10^{-24}\ g\ )\}/(\ 1.675x10^{-24}\ g)$
  =29.399≈29 -(*mass has been added as Energy during the formation*)
- **Factor of Nuclear Instability=Number of N/Number of P**

  NIF =29/26=1.11(*Stable*)

15 GOLD

Electron=9.108×10^{-28} g, Proton=$1.672\ x10^{-24}$ g, Neutron= $1.675x10^{-24}$ g

Mp+Me=1.6729×10^{-24} g

- **Avogadro Quantity A=6.022×10^{23}**
- **Atomic Mass= 196.966g**
- **Atomic Radius=1.44a**
- **Density of Vacuum ρ ≈0.004 g/cm3**
- **Number of Protons=79**

Gravitational Mass=M_g	Particle Radius R	Particle Volume V	Mass of Vacuum bulb M_v =ρV =(0.004)V	Actual MASS =M_g + M_v	SSD $=\frac{Mg+Mv}{Mv}$	FNI $=\frac{Neutrons}{Protons}$
$3.270x10^{-22}$ g	$1.44\ x10^{-8}$ cm	$1.25\ x10^{-23}$ cm3	$5.003\ x10^{-26}$ g	$3.270x10^{-22}$g **196.96g/mole**	6536	1.47

- **Actual Density of Gold** = actual Mass/volume
  = 3.270×10^{-22} g/1.25×10^{-23} cm3
  26.16 g/cm3;

- **Number of Neutrons** (nearest round up number)

  = [Gravitational mass-mass of 79(Proton+Electron)]/Mass of Neutron

  $=\{(3.27 \times 10^{-22}\ g)-79(1.6729 \times 10^{-24}\ g)\}/(1.675 \times 10^{-24}\ g)$

  =116.323 ≈<u>116</u> -(*mass has been added as Energy during the formation*)

- **Factor of Nuclear Instability=Number of N/Number of P**

  <u>NIF =116/79 =1.47</u>(*nearly Stable*)

16 MERCURY

Electron=9.108×10^{-28} g, Proton=1.672×10^{-24} g, Neutron= 1.675×10^{-24} g

Mp+Me=1.6729×10^{-24} g

- **Avogadro Quantity A=6.022×10^{23}**
- **Atomic Mass=200.59 g**
- **Atomic Radius=1.6a**
- **Density of Vacuum ρ ≈0.004 g/cm3**
- **Number of Protons=80**

Gravitational Mass=M_g	Particle Radius R	Particle Volume V	Mass of Vacuum bulb $M_v = \rho V = (0.004)V$	Actual MASS $=M_g + M_v$	SSD $=\frac{Mg+Mv}{Mv}$	FNI $=\frac{Neutrons}{Protons}$
3.331×10^{-22} g	1.6×10^{-8} cm	1.716×10^{-23} cm3	6.863×10^{-26} g	3.332×10^{-22}g **200.65g/mole**	4855	1.48

- **Actual Density of Mercury** = actual Mass/volume

  $= 3.332 \times 10^{-22}\ g/1.716 \times 10^{-23}\ cm3$

  <u>19.417 g/cm3</u>;

- **Number of Neutrons** (nearest round up number)

  = [Gravitational mass-mass of 80(Proton+Electron)]/Mass of Neutron

  $=\{(3.331 \times 10^{-22}\ g)-80(1.6729 \times 10^{-24}\ g)\}/(1.675 \times 10^{-24}\ g)$

  =118.96 ≈<u>119</u> -(*mass has been lost as Energy during the formation*)

- **Factor of Nuclear Instability=Number of N/Number of P**

  <u>NIF =119/80 =1.48</u> (*weakly stable*)

17 LEAD:

Electron=9.108 x 10^{-28} g, Proton=1.672 x10^{-24} g, Neutron= 1.675x10^{-24} g

Mp+Me=1.6729 x 10^{-24} g

- **Avogadro Quantity A=6.022 x 10^{23}**
- **Atomic Mass=207.2 g**
- **Atomic Radius=1.75a**
- **Density of Vacuum ρ ≈0.004 g/cm3**
- **Number of Protons=82**

Gravitational Mass=M_g	Particle Radius R	Particle Volume V	Mass of Vacuum bulb M_v =ρV =(0.004)V	Actual MASS =M_g + M_v	SSD $=\frac{Mg+Mv}{Mv}$	FNI $=\frac{Neutrons}{Protons}$
3.441x10^{-22} g	1.75 x10^{-8} cm	2.245 x10^{-23} cm3	8.98 x10^{-26} g	3.442x10^{-22}g **207.28g/mole**	3833	1.5

- **Actual Density of Lead** = actual Mass/volume
  = 3.441 x 10^{-22} g/2.245 x 10^{-23} cm3
  <u>15.32 g/cm3</u>;
- **Number of Neutrons** (nearest round up number)

  = [Gravitational mass-mass of 82(Proton+Electron)]/Mass of Neutron
  ={(3.441x 10^{-22} g)-82(1.6729 x 10^{-24} g)}/(1.675x10^{-24} g)
  =123.53 ≈<u>123</u> -(*mass has been added as Energy during the formation*)

- **Factor of Nuclear Instability=Number of N/Number of P**

  <u>NIF =123/82 =1.5</u> (*weakly stable*)

18 Radon

Electron=9.108 x 10^{-28} g, Proton=1.672 x10^{-24} g, Neutron= 1.675x10^{-24} g

Mp+Me=1.6729 x 10^{-24} g

- **Avogadro Quantity A=6.022 x 10^{23}**
- **Atomic Mass=222 g**
- **Atomic Radius=1.71a**
- **Density of Vacuum ρ ≈0.004 g/cm3**
- **Number of Protons=86**

Gravitational Mass=M_g	Particle Radius R	Particle Volume V	Mass of Vacuum bulb M_v =ρV =(0.004)V	Actual MASS =M_g + M_v	SSD $=\frac{Mg+Mv}{Mv}$	FNI $=\frac{Neutrons}{Protons}$
3.686 x10^{-22} g	1.71 x10^{-8} cm	2.245 x10^{-23} cm3	8.98 x10^{-26} g	3.687x10^{-22}g **222.024g/mole**	4105	1.56

- **Actual Density of Radon** = actual Mass/volume
  = 3.687 x 10^{-22} g/2.245 x 10^{-23} cm3
  <u>16.42 g/cm3</u>;
- **Number of Neutrons** (nearest round up number)

  = [Gravitational mass-mass of 86(Proton+Electron)]/Mass of Neutron
  ={(3.686x 10^{-22} g)-86(1.6729 x 10^{-24} g)}/(1.675x10^{-24} g)
  =134.167 ≈<u>134</u> -(*mass has been added as Energy during the formation*)

- **Factor of Nuclear Instability=Number of N/Number of P**

  <u>NIF =134/86 =1.56</u> (unstable)

19 URANIUM

[Electron=9.108 x 10^{-28} g, Proton=1.672 x10^{-24} g, Neutron= 1.675x10^{-24} g] =3.348 x10^{-24} g

Mp+Me=1.6729 x 10^{-24} g

- **Avogadro Quantity A=6.022 x 10^{23}**
- **ρ(vacuum) =0.4 g/cm3**
- **P_0 = 1.8 x 10^{20} dynes cm^{-2}**
- **Atomic Mass = 238.028 g**
- **Atomic Radius=1.385 a**
- **Protons=92**

Gravitational Mass=M_g	Particle Radius R	Particle Volume V	Mass of Vacuum bulb $M_v = \rho V$ $=(0.004)V$	Actual MASS $=M_g + M_v$	SSD $=\frac{Mg+Mv}{Mv}$	FNI $=\frac{Neutrons}{Protons}$
3.952×10^{-22} g	1.385×10^{-8} cm	1.113×10^{-23} cm3	4.451×10^{-26} g	3.952×10^{-22}g **238g/mole**	8879	1.56

- **Actual Density of Uranium** = actual Mass/volume
  = 3.952×10^{-22} g/1.113×10^{-23} cm3
  35.5 g/cm3;
- **Number of Neutrons** (nearest round up number)

  = [Gravitational mass-mass of 92(Proton+Electron)]/Mass of Neutron
  ={(3.952x 10^{-22} g)-92(1.6729 x 10^{-24} g)}/(1.675x10^{-24} g)
  =144.05 ≈144 -(*mass has been added as Energy during the formation*)

- **Factor of Nuclear Instability=Number of N/Number of P**

  NIF =144/92 =1.56 (unstable)

20 SUMMERIZATION:

Table-1: TYPICAL ELEMENT PROPERTIES

ELEMENT	RADIUS X 10^{-8} cm	ACTUAL MASS grams/mole	ATOMIC DENSITY g/cm3	SPESICIF SOLID DENSITY-(SSD)	NEUTRONS	FACTOR OF NUCLEAR INSTABILITY (FNI)
$^{1}H_{1.008}$	0.78	1.013	0.846	213	0	0
$^{2}He_{4.002}$	1.28	4.023	0.760	190	2	1
$^{6}C_{12.011}$	0.77	12.012	10.434	285	6	1
$^{8}O_{15.999}$	0.66	16.000	6.343	1586	8	1
$^{26}Fe_{55.847}$	1.56	55.886	5.836	1459	29	1.11
$^{79}Au_{196.966}$	1.44	196.96	26.12	6536	116	1.46
$^{80}Hg_{200.59}$	1.60	200.65	19.42	4855	119	1.48
$^{82}Pb_{207.21}$	1.75	207.28	15.32	3833	123	1.50
$^{86}Rn_{222}$	0.71	222.024	16.42	4105	134	1.56>1.5
$^{92}U_{238.022}$	1.385	238	35.5	8879	144	1.56>1.5

SUMMARIZATION:

1. **Gravitational weighing doesn't count the mass of the Vacuum Bulb**
2. **Periodic Table has to be revised with Actual Mass of Elements**

Actual Mass = Gravitational Mass + Mass of the Vacuum Bulb

3. **Atomic Density is not the Molecular Density of an Element**

Atomic Density =Actual Mass/Volume

4. **Specific Solid Density(SSD) is a measure of Solidity of Elements**

SSD= Actual Mass/Mass of the Vacuum Bulb

SSD of Vacuum =1

5. **Neutrons= <u>Gravitational Mass - Mass of (Protons +Electrons)</u>**

Mass of a Neutron

The nearest round up number is considered.

- ***If the number needs some decimals, Energy has been lost by formation of the Element.***
- ***If the number rejects some decimals, Energy has been added by formation of the Element.***

6. **Factor of Nuclear Instability(FNI)**

FNI = Number of Neutrons/ Number of Protons

- **FNI<1.5 :Stable**
- **FNI>1.5 :Unstable**

21 DISCUSSION:

- **Different Physical Properties belong to LIQUID or GAS states of Elements are not reflected in any significant identity by the Periodic Table.**

  Q: For an instant, Radon is an Element of high density (16.42g/cm3) and how on earth it could fly up in the air being a Gas?

  A: Density of the atmospheric air is very low (≈0.001g/cm3) and hence Archimedes law of **buoyancy** could not help at all to explain how these Heavy Elements are lifted up against **Gravity**. Not only Radon but just look at Hydrogen, known as the lightest element in WORLDS, possesses a bigger atomic density (0.864g/cm3) than that of atmospheric air and then how could it fly up in the sky? Can the theories of Relativity or Quantum Mechanics from the 20^{th} century explain this phenomenon?

  Look at the table-1 and you would observe the Elements (or compounds made up of the elements) Hydrogen, Carbon, Oxygen & Radon etc. possess smaller bodies of shorter Radius in the STRUCTURES. What does it really indicate?..” Higher **Interior Rotary Dynamics** " is the one and only answer.

  Gravitational waves possesses a certain frequency (approx. 10^7 turns per second as per my calculations) and if any rotary dynamic system exceeds that degree of frequency, it should fly conquering the so mighty force of **GRAVITY**.

  Proton is the culprit which makes **Nucleus** spin and hence the high speed interior rotary dynamics in Hydrogen is easily understood but how could such a heavy nucleus, such as Radon, could spin so speedily?

  But just look at Jupiter, being the **heaviest planet** in the planetary system, completes such a big round of spinning by just 9.9 hours. Hence it is not the weight but strength of the **Atomic Spherical Vortex** is to decide the speed of spinning.

  Q: How do you connect **flying ability** of a **Gas** with the speed of interior rotary dynamics of Atom?

  A: Question of the **Physics** of **Chemistry**?.... Yes, just throw a steel disc away to observe its normal quick falling under Gravity. Then spin it and throw to observe falling of it under the same Gravity but being delayed to touch the ground. Then I’ll calculate and tell you the exact spinning speed so that the disc shall never touch the ground back by Gravity.

Q: How could **heat** change the states of Elements from **Solid** to **Liquid** and so further to make them fly as **Gas**?

A: HEAT is the flux of **Protons** absorbed by the **Nucleus** as Energy to spin. Increased input of heat flux means **acceleration** of **Interior Rotary Dynamics** in Atom which is the root cause behind changing of **physical states** of the Element.

Q: Do you accept that the three fundamental categories of 'MATTER' known as '**Solid**', '**Liquid**' and '**Gas**' are well reflected by the Modern Periodic Table?

A: Only one out of the three fundamental categories of 'MATTER' has been addressed in the so far modernized periodic table but I wonder why other two categories are badly overlooked in the so far developed background art.

Q: What are the other two missed in the background Science?

A: Solid, Liquid and Gas are just the three physical states of the same category of '**ATOMIC MATTER'**. The other two categories such as '**ENERGY MATTER**' and '**MEDIUM MATTER-Vacuum**' has not been realistically addressed in the so far developed background art.

Light is defined vaguely by the theories from the 20th century as of 'half wave and half particle' so that nobody could figure it out. Light is **massless** in some theories and **Heat** has not even been addressed ever since after the realistic practical laws of Thermodynamics established by the period of Industrial Age.

I should like to draw your attention upon the 4th daring assumption made at the 1st page of this paper such as; "***ENERGY has no separate entity away from MATTER***"

For an instant, **Gravity** is not a Material at all, but it transmits Energy by means of **Vibrations** propagating through the **Vacuum Medium** of Particles as WAVES.

But 'ENERGY MATTER' is a separate fundamental category of MATTER and the Elementary Particles such as; **Light Photons**, **Heat Photons** and **Electrons** are belonged to that particular category.

1) **ATOMIC MATTER**: Spherical Solid Particles of Interior Rotary Dynamics(Atoms of Elements)
2) **ENERGY MATTER**: Spherical Vacuum Particles of Exterior Linear Dynamics (Light Photons, Heat Photons, Electrons, Solar Wind, Galactic Wind etc.)
3) **MEDIUM MATTER**: Spherical Vacuum Particles of neither Interior nor Exterior Dynamics (Free space medium, Vacuum bulb of Atom, Vacuum bulb of Electron, Vacuum bub of Photon etc.)

However I would like to end up the technical paper by the expression;

" **THINGS** without realistic definitions to describe '**STRUCTURES**(figures)' and '**DYNAMICS**(behavior)' are just creation of NOUNS".

By,

Cyril H Thalpe Gamage. 08.10.2019

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