Multidimensional Space Time /

Space Time Structure and Value of Physical Unit

---Chapter 2 of Popularized Version

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Feeding Back Theory of the Universe (FBTU) is a newly developed space time theory which unifies all physical units onto 5 dimensions of space and 5 dimensions of time of the universe , and figure out space time structure for almost physical units including vacuum unit and information unit . Having established an unique space time analysis method so called STC analysistechnique , therefore this theory has reshuffled physics and cosmology in terms of fundamental physical concepts breakthrough . Sticking to well self-explained logically and well compatible with well established fundamental physics principles , FBTU yields such considerable and stunning calculating results and conclusions that perfectly match all observation datum available in both physics , astronomy and cosmology . More importantly , this theory turns up every corner of the universe and exhibits all things happened in past of the universe in terms of their space time structure and their physical effect exerted onto substantiated world we live.

Such as :

Essential Physical initiatives

Every physical unit , expressed as $\dim A$, has its own space time structure which is consists of specific numbers of dimensions of space and time called space time configuration (STC) , and also has space time value abbreviated as STV .

Math-Physics Expression

Space Time Configuration : $STC(\dim A) = Bm^a s^{-b}$

here , B **is an coefficient** , $B \geq |G| = 6.67259 \times 10^{-11}$.

$$a, b = 0, \pm 1, \pm 2, \pm 3, \pm 4, \pm 5 \quad ;$$

Space Time Value : $STV(\dim A) = STV(Bm^a s^{-b})$,

here , $m = 2.4686279637116245... \times 10^{34}$

$$s = 0.7400760451286427... \times 10^{43}$$

More importantly , this theory enable us to deal quantitatively with and give essential explanations to those fundamental questions even not involved in physics and cosmology so far , such as ,

Where do things happed in the past go ? What kind of forms they shape at present ? What are relations between events happened in the past and the substantiated universe ? etc .

Space Time Configuration and Value of Physical Unit

Concept about multidimensional space emerged long time ago , is already customized to physicist even public . But if asking furthr , What does multidimensional space look like ? Can we perceive them ? , No one can figure them out explicitly . Usually professionals or specialists firstly could present you a pile of monograph , similar to Quantum Field Theory , Canonical Field Theory , Black Hole and Curved Space Time , etc. billed by mankind as the most superior theory and most precious spiritual product . Allegedly only authors plus a few guest professors in several famous universities can really understand what is all about these monograph presented , rest of readers are almost half savvy in their understanding . You page them randomly , and instantly get a sense of respect and admiration , and really understand what is so called superior theory in physics and what is the noble spirit of dedication to scientific enterprise .
Beginning from framework of 3 dimensions of space and 1 dimension of time construed in General Relativity , and along with development of Field Theory , multidimensional concept had been hijacked and misused . In these theories , It was purely treated as results of mathematical inference , subsequently wrought out 9 multidimensional space , that of 10 , 11 . Reportedly new field theory has wrought out a multidimensional space excess to 11 dimensions . If you ask an physicist , what kind of form do these multidimensional space appears ? He will tell you they are curved , you can not see them .
Could you see them ? asked him .
Could not either . No one could see them , he will reply . Also so far it could not be verified by experiment and observation , it is only theoretical results derived from Field Theory .

Physicists can passionately sprint and traverse over pure theoretical territory like a lively pony as their career required , but the public has no interest in such ambiguous explanation . Now a feeling of such superior theories in some aspects seem to be just nice look but useless . In response to public enquiry about some fundamental question with respect to the nature , it has a little difference than saying nothing , although some scientists have finally recognized that methodology now utilizing by physicists of academic mainstream in attempt to solve general physical know how based on local validated theory must go wrong .

Then , How many dimensions of space does the Universe have ?
Is there only one dimension for time ? or multidimensional as well ?

Now we deem length unit m represents one dimensional space , time unit s that of time ; m^a represents a dimensional space , s^{-b} that of b dimensional time .

Still begin we from *G* gauge while depending on experimental observed datum available and the

most reliable of calculation to seek the answer .

We know from inference of *G* gauge introduced in Chapter 1 that :

$$m=\frac{1}{0.4050833153880067...\times10^{-34}}=2.4686279637116245...\times10^{34}$$

$$s=\frac{1}{1.3512124957728855...\times10^{-43}}=0.7400760451286427...\times10^{43}$$

$$kg=\frac{1}{0.5456213067563055...\times10^{-7}}=1.8327730013788420...\times10^{7}$$

$$K=\frac{1}{0.3551784548210921...\times10^{33}}=2.8154860927690915...\times10^{-33}$$

Introducing them in physical expression of physical constants G , h , c , k_B , by calculation we have :

From Gravitational Constant $G=|G|m^3kg^{-1}s^{-2}=6.67259\times10^{-11}m^3kg^{-1}s^{-2}$

$=(6.67259\times10^{-11})(2.4686279637116245...\times10^{34})^3(1.8327730013788420...\times10^{7})^{-1}$

$(0.7400760451286427...\times10^{43})^{-2}=0.9999999999999998...\approx1$, thus :

$$kg=|G|m^3s^{-2}\ ,$$

that is , mass of one kilogram is consists of 3 dimensions of space , minus 2 dimensions of time and an coefficient $|G|$

Its space time value (observed ones) equals :

$$STV(kg)=STV(|G|m^3s^{-2})$$
$$=(6.67259\times10^{-11})(2.4686279637116245...\times10^{34})^3(0.7400760451286427...\times10^{43})^{-2}$$
$$=1.8327730013788420...\times10^{7}$$

Its theoretical value equals $1.8333333333333333...\times10^{7}$

Also , $G=|G|m^3kg^{-1}s^{-2}=\frac{|G|m^5s^{-4}}{J}=1$, thus :

$$J=|G|m^5s^{-4}$$

that is , **energy of one Joule is consists of 5 dimensions of space , minus 4 dimensions of time and an coefficient** $|G|$ **;**

Its space time value (observed ones) equals :

$$STV(J) = STV(|G|m^5 s^{-4})$$
$$= (6.67259\times10^{-11})(2.4686279637116245...\times10^{34})^5 (0.7400760451286427...\times10^{43})^{-4}$$
$$= 2.0392349827177270...\times10^{-10}$$

Its theoretical value equals $2.037037037037037...\times10^{-10}$

From Planck Constant $h = |h| Js = 6.6260755\times10^{-34} Js$

$=(6.6260755\times10^{-34})(2.0392349827177270...\times10^{-10})(0.7400760451286427...\times10^{43})$

$=1.0000000366920639... \approx 1$, thus :

$$s^{-1} = |h| J \quad \textbf{or} \quad J = \frac{s^{-1}}{|h|} = \frac{1}{|h|} H_Z$$

From **Speed of Light Constant** $c = |c| ms^{-1}$

$=(2.99792458\times10^{8})(2.4686279637116245\times10^{34})(0.7400760451286427...\times10^{43})^{-1}$

$=1.0000000000000000...$, thus :

$$s = |c| m \quad \textbf{or} \quad m = \frac{s}{|c|}$$

From **Boltzmann Constant** $k_B = |k_B| JK^{-1}$

$=(1.380658\times10^{-23})(2.0392349827177270...\times10^{-10})(2.8154860927690915...\times10^{-33})^{-1}$

$=1.0000000000000000...$, thus :

$$K = |k_B| J = |k_B| |G| m^5 s^{-4} = (1.380658\times10^{-23})(6.67259\times10^{-11}) m^5 s^{-4}$$
$$= (9.21256476422\times10^{-34}) m^5 s^{-4}$$
$$= (9.21256476422\times10^{-34})(2.4686279637116245...\times10^{34}) m^4 s^{-4} \ ,$$
$$= 22.7424 m^4 s^{-4}$$

thus : $K = 22.7424 m^4 s^{-4}$,

that is , temperature of one Kelvin is consists of 4 dimensions of space , minus 4 dimensions of time and an coefficient of 22.7424 . ;

(actually theoretical value of this coefficient equals

$$\frac{1}{a|N_A|\times10^{-23}} = 22.7773029934306633... \approx 22.7773 。$$

Here a is Fine Structure Constant , $|N_A|$ is modulus of Avogadro Constant N_A)

Its space time value (observed ones) equals :

$$STV(K) = STV(22.7424 m^4 s^{-4})$$
$$= (22.7424)(2.4686279637116245...\times 10^{34})^4 (0.7400760451286427...\times 10^{43})^{-4}$$
$$= 2.8154860927690915...\times 10^{-33}$$

Its theoretical value equals $2.2.8120127152383534...\times 10^{-33}$

Preliminary calculation show two striking points :

1 ， All the most elementary physical constants equals and are equal to 1 in value ;

2 ， Basic physical units can be expressed in manner of specific numbers of dimensions of space , time and a particular coefficient , that is , their space time structure .

These two arguments are appalling enough to knock physicists' specular fall !
Golly !! These stuff are the foundation of our physics !

Then are there similar space time structure for other physical units ?
We can explore them by following same method to calculate continuously . Firstly figure out space time structure for all basic physical units , and then by relationship between basic physical unit and derived unit to calculate those of all derived physical units . If all calculation results confirm these two arguments , then the question will become too serious indeed !

Consumed careful analysis and penetrating ponder , space time structure for Electric Current Intensity and Substance Amount are pitched upon as below :
Space time structure of **Electric Current Intensity Unit**

$$A = \sqrt{|G|} m^3 s^{-3}$$

That is , **electric current of one Ampere is consists of 3 dimensions of space , minus 3 dimensions of time and an coefficient of** $\sqrt{|G|}$.

Its space time value (observed ones) equals :

$$STV(A) = STV(\sqrt{|G|} m^3 s^{-3})$$
$$= (0.8168592289984853\times 10^{-5})(2.4686279637116245\times 10^{34})^3 (0.7400760451286427\times 10^{43})^{-3}$$
$$= 0.3031692234576164..\times 10^{-30}$$

Its theoretical value equals $0.3025855350368333...\times 10^{-30}$

Space time structure of **Substance Amount Unit**

$$mol = am^2 s^{-1}$$

here , a **is fine structure constant**

That is , substance amount of one mol is consists of 2 dimensions of space , minus 1 dimensions of time and an coefficient of fine structure constant .
Its space time value equals :

$$STV(mol) = STV(am^2 s^{-1})$$
$$= (0.00729735308)(2.4686279637116245 \times 10^{34})^2 (0.7400760451286427 \times 10^{43})^{-1}$$
$$= 6.0221367.. \times 10^{23}$$

Its theoretical value equals $6.0147595191367907... \times 10^{23}$

By calculation , we do find that the most elementary physical constants equals in their value and is equal to 1 , that is ,

$$G = h = c = k_B = N_A = L_G = t_G = M_G = T_G = I_G = ...1$$

here I_G is electric current gauge .

See detail at

Completable Space Time and Default Space Time

at http://www.universefedback.com/PaperAS.htm

G Bubble Burst and the Universe Being Created

at http://www.universefedback.com/PaperCS.htm

Limited my personal skill (not the theory itself) , space tme structure for Luminous Intensity Unit is absent temporarily , nevertheless that equipped with such superweapon of STC analysistechnique could enough make it possible to win 99 but 1 in 100 battles on combating field agaist frontal conundrum in physics and cosmology .

Space time structure of physical quantity or physical unit is also called as Space Time Configuration . General definition are :

Every physical quantity has its own space time structure which can be expressed by an formula with specific numbers of dimensional space , dimensional time and an coefficient . Called such expression as Space Time Configruation (STC) of this physical quantity .

For any physical quantity $A =| A | \dim A$

Here , $| A |$ represents modulus of A , $\dim A$ dimensional expression of A , then this dimensional expression of the physical quantity can be expressed as :

$$\dim A = Bm^a s^{-b}$$

Here , B is an coefficient , $B \geq | G | = 6.67259 \times 10^{-11}$.

$$a, b = 5,4,3,2,1,0,-1,-2,-3,-4,-5$$

m represents one dimensional space , s one dimensional time.

Thus space time configuration of this physical quantity is

$$STC(A) =| A | Bm^a s^{-b}$$

When $|A|=1$, this formula represent space time configuration of the physical unit .

$$STC(\dim A) = Bm^a s^{-b}$$

Space time value of physical quantity and physical unit (STV)

Defined value of physical quantity A or physical unit $\dim A$ as their space time value , expressed by $STV(A)$.

That is : $STV(A) = STV(|A| Bm^a s^{-b})$

We do some homework now :

By STC of basic physical unit , find out STC and STV for 10 derived physical units choosed randomly .

1 , Force unit : $N = kgms^{-2} = |G| m^3 s^{-2} ms^{-2} = |G| m^4 s^{-4}$,

so , $STC(N) = |G| m^4 s^{-4}$,

Newton is consists of 4 dimensional space , minus 4 dimensional time and coefficient of $|G|$;

and , $STV(N) = 0.8260600676546261... \times 10^{-44}$

（To get this result by substituting

$m = 2.4686279637116245... \times 10^{34}$

$s = 0.7400760451286427... \times 10^{43}$

in formula of $STC(N)$, omited calculation procedure , same as below）

2 , Momentum unit : $P = kgms^{-1} = |G| m^3 s^{-2} ms^{-1} = |G| m^4 s^{-3}$,

So , $STC(P) = |G| m^4 s^{-3}$

Momentum unit s consists of 4 dimensional space , minus 3 dimensional time and coefficient of $|G|$;

And , $STV(N) = 0.0611134726790853...$

3 , Angular momentum unit : $j = kgms^{-1} m = |G| m^3 s^{-2} ms^{-1} m = |G| m^5 s^{-3}$,

So , $STC(j) = |G| m^5 s^{-3}$

Angular momentum unit s consists of 5 dimensional space , minus 3 dimensional time and coefficient of $|G|$;

and , $$STV(j) = 0.1509188961097711...\times 10^{34} = \frac{1}{|h|}$$

4 , Electric quantity unit : $C = As = \sqrt{|G|}m^3 s^{-3} s = \sqrt{|G|}m^3 s^{-2}$,

So , $$STC(C) = \sqrt{|G|}m^3 s^{-2}$$

Coulomb is consists of 3 dimensional space , minus 2 dimensional time and coefficient of $\sqrt{|G|}$.

and , $$STV(C) = 0.2243682799086353...\times 10^{13}$$

5 , Power unit : $W = Js^{-1} = |G|m^5 s^{-4} s^{-1} = |G|m^5 s^{-5}$,

So , $$STC(W) = |G|m^5 s^{-5}$$

Watt is consists of 5 dimensional space , minus 5 dimensional time and coefficient of $|G|$;

And , $$STV(W) = 2.7554397904653969...\times 10^{-53}$$

6 , Electric Voltage unt : $V = WA^{-1} = |G|m^5 s^{-5} / \sqrt{|G|}m^3 s^{-3} s = \sqrt{|G|}m^2 s^{-2}$,

So , $$STC(V) = \sqrt{|G|}m^2 s^{-2}$$

Voltage is consists of 2 dimensional space , minus 2 dimensional time and coefficient of $\sqrt{|G|}$.

And , $$STV(V) = 0.9088784669330808...\times 10^{-22}$$

7 , Magnetic flux unit : $W_b = Vs = \sqrt{|G|}m^2 s^{-2} s = \sqrt{|G|}m^2 s^{-1}$

So , $$STC(W_b) = \sqrt{|G|}m^2 s^{-1}$$

Weber is consists of 2 dimensional space , minus 1 dimensional time and coefficient of $\sqrt{|G|}$.

And ,, $$STV(W_b) = 0.6726391813104178...\times 10^{21}$$

8 , Electric field strength unit : $E = Vm^{-1} = \sqrt{|G|}m^2 s^{-2} m^{-1} = \sqrt{|G|}ms^{-2}$

So , $$STC(E) = \sqrt{|G|}ms^{-2}$$

Electric field strength unit is consists of 1 dimensional space , minus 2 dimensional time and coefficient of $\sqrt{|G|}$.

And ,, $STV(E) = 0.3691715026700766... \times 10^{-56}$

9 , **Magnetic field strength unit :** $H = Am^{-1} = \sqrt{|G|}m^3 s^{-3} m^{-1} = \sqrt{|G|}m^2 s^{-3}$

So , $STC(H) = \sqrt{|G|}m^2 s^{-3}$

Magnetic field strength unit is consists of 2 dimensional space , minus 3 dimensional time and coefficient of $\sqrt{|G|}$.

And , $STV(H) = 0.1228087941658605... \times 10^{-64}$

10 , **Magnetic flux density unit :** $T = Vsm^{-2} = \sqrt{|G|}m^2 s^{-2} sm^{-2} = \sqrt{|G|}s^{-1}$

So , $STC(T) = \sqrt{|G|}s^{-1}$

Tesla is consists of 0 dimensional space , minus 1 dimensional time and coefficient of $\sqrt{|G|}$.

And , $STV(T) = 1.1027503975101583... \times 10^{-48}$

Look ! What beautifule they are !

My dear readers , now you can conceive , feel , even touch so called multidimensional space time , and recognize them with so familiar faces . They are just around us , objective , substantial , not allegedly mysterious , curved and untouchable . They are nothing but simply space time structure of physical units only .

10 Dimensional Space-Time of the Universe

Sifting thoroughly among all STC of all physical units both basic and derived ones , we find out that numbers of dimensions both for time or space which any physical unit contains are equal or less than 5 . As long as this bar has not been broken under full coverage of physics , that is : condition

$$5 \geq |a| \geq 0 , \quad 5 \geq |b| \geq 0$$

Is not breached , we would absolutely convince that the univers3e is consists of **5 dimensional space** and **5 diensional time** , in other word , the universe is composed of **10 dimensional space time .**

At last , we introduce two most important physical units with their space time structure :

$S_{i,i-1}^{-2}$ **(information unit)** ; $|G|m^3$ **(Vacuum unit)**

These stuff in front of us is right what scientists having been looking for almost half century . They are such simple in expression , but so deeply potential importance in their physical meaning . Elaborated them in detail later on .

No doubt , these updated physical concepts regarding space time configuration and space time value for physical units are of revolution and essence .
It would certainly bring us something so big .

Continue to read
Completable Space Time / Elementary Physical Constant
--- Chanter (3) of Popularized Version

Edited in Oct.6,,2007 , Dalian , China .
Translated in Mar.22,2008 , Dalian , China .