Position of Baby Bodies in Any Gravitational Field

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Abstract

Titius-Bode law of position of planets in solar system; dose not consider the gravitational energy levels of parent gravitational field of Sun at which planets (and all baby bodies of any gravitational field) are placed.

When he mass of Sun was converted / calculated in Planck masses (unit masses) and the distances were calculated / converted   in Planck least lengths, then it was observed that the Sun mass in **number** of unit masses is equal to **number** of Planck least lengths (i.e. number bound treo layers, as per proposed Treo model) in radius of gravitational sphere of Sun [9]. The same size of gravitational sphere of Sun was calculated by General theory.

In any gravitational field its first baby condenses at 10^4 th gravitational field quantum level of this body.
It is observed that in Sun's gravitational field the primary baby bodies condenses at 10 planetary quantum levels in between 10^4 to 10^5 quantum levels, as calculated below.
This was calculated and found correct for all baby bodies of four outer Planets (Jupiter, Saturn, Uranus and Neptune) in Solar System and for position of baby bodies of star TRAPPIST 1, out side our solar system.

The gravitational kinetic energy levels v^2 (can also be calculated according to Newton's *formula $v^2 = MG/r$)* in any gravitational field, which decides the position of all baby bodies of this cosmic body.

The Gravitational kinetic energy of Sun levels (i.e. **_v^2 levels_**) in its planetary orbits, decides the position of baby bodies or vice versa.

If this v^2 is calculated as **E** at Mercury (First planet or baby body of Sun); then at **E/2** is Venus, at **E/3** is Earth, at **E /4** or $E/2^2$ is Mars, at E /9 or **E/3^2** is Cereus & asteroid belts, at E /16 or **E/4^2** is Jupiter, at E /25 or **E/5^2** is Saturn, at E /49 or **E/7^2** is Uranus, E / 81 or **E/9^2** is Neptune and exactly at E /100 or **E/10^2** is Pluto.

At energy levels **E/ 6^2 and E/8^2** are other Planetoids, at E/13^2 is minor planet Eris and energy levels in orbit of all Planetoids in outer solar system is calculated.

It is also observed that biggest baby body in any gravitational field condenses at E /9 or E/3^2 energy level in its gravitational field and this observation was confirmed by calculating the position of biggest satellite of all outer planets (**Ganymede** of 5262 Km diameter of Jupiter, **Titan** of 5780 Km diameter of Saturn, **Titanium** of 1578 Km diameter of Uranus, and **Triton** of 2706 Km diameter of Neptune are biggest satellites of their parent body).[8]

1. Formation of 'Gravitational Quantum Levels' in Gravitational Field of Sun.

The mass of Sun was converted / calculated in Planck masses (unit masses) and the distances were calculated / converted in Planck least lengths. It was observed that the Sun mass in **number** of unit masses is

equal to **number** of Planck least lengths (i.e. number bound treo layers, as per proposed Treo model) are in radius of gravitational sphere of Sun. The same size of gravitational sphere of Sun is calculated in general theory.

It is calculated that sun is made of 10^{38} Planck's masses (i.e. 0.914×10^{38} = 1.989×10^{30} Kg divided by 2.176×10^{-8} kg in Planck Mass).

Following proposed coloumn geometry, at each nth gravitational field quantum level $2n-1 \times \mathbf{10^{38}}$ **bound treo layers** are added; and thus up to any n^{th} quantum level $n^2 \times \mathbf{10^{38}}$ **bound treo layers** are added.

Thus for first gravitational quantum level $\mathbf{1 \times 10^{38}}$ **bound treo layers** of gravitational field are required, for second quantum level **next 3×10^{38} bound treo layers** are added, at third quantum level next $\mathbf{5 \times 10^{38}}$ **bound treo layers** are added, for fourth quantum level $\mathbf{7 \times 10^{38}}$ **bound treo layers are added** in radius and **subsequently $2n–1 \times 10^{38}$ bound treo layers** are added at any next n^{th} quantum levels.

Thus, bound treo layers up to any desired quantum level = **Square of quantum number × Bound treo layers in gravitational sphere of parent body** (which are also equal to the Number of unit masses, as mass energy of parent body)

2. Distance of $10^{4\,Th}$ Quantum Level from Sun.
(Number of Bound Treo layers from Gravitational Center of Sun up to 10^{4Th} Quantum Level)

In second dimensional deformation in any gravitational field, at 10^{4th} quantum level the first baby body (Planets and Satellites) condense.

Now if we calculate total number of bound treo layers (the distance from gravitational center of Sun) **up to any n^{th} quantum level it will be total $n^2 \times 10^{38}$ bound treo layers in gravitational sphere.**

Distance of 10^{4th} quantum level from center of Sun, when calculated in number of bound treo layers = square of quantum level $\times 10^{38}$ bound treo

layers in gravitational sphere of sun = $(10^4)^2 \times 10^{38} = 10^{46}$ bound treo layers in gravitational coloumn of Sun from its gravitational center.

The mercury first planet of Sun is at 0.626 x $\mathbf{10^4}$ **th** quantum level. Similarly at 0.952 x $\mathbf{10^4}$ **th gravitational** field quantum level of Jupiter is its first satellite Metis, 1.77 x $\mathbf{10^4}$ **th** quantum level of Saturn is Pan its first satellite, 0.277 x 10^4 th quantum level x $\mathbf{10^4}$ **th** quantum level of Uranus is its first satellite Cordilia, 2.5031 x $\mathbf{10^4}$ **th** quantum level of Uranus is its first satellite Naiad, and even outside our solar system the first planet of **star Trappist 1 is at 0.374 x 10^4 th quantum level**

3. Planets are placed at 10 'planetary Energy Levels' from 10^{4th} to 10^{5th} Quantum Level

We find the all big solar planets in second dimensional deformation of gravitational field of Sun, and are placed at ten energy levels in 10 planetary quantum energy levels, between 10^{4th} & 10^{5th} gravitational field quantum levels.

4. Calculation of Gravitational Kinetic Energy in Orbit of Mercury 'E'

E_m = total number of kinetons (v^2) are in any one 'sub kinetic coloumn', at this 10^{4th} quantum level in gravitational coloumn of sun, at which lies the planetary orbit of our first planet Mercury' (according to Newton's *formula $v^2 = MG/r$)*is $\mathbf{E_m = \underline{8.776444393 \times 10^{78}\ kinetons}}$

This Gravitational Kinetic energy v^2 in each sub kinetic coloumn in orbit of Mercury calculated as per treo model.

$\mathbf{E_m = \underline{8.776444393 \times 10^{78}\ kinetons}} = v^2 = Mg/r\ (3.145233887 \times 10^{124} /0.3583722239 \times 10^{46})$

5. Position of Planetary Orbits of other planets at Different Quantum Levels of Sun

In Sub shells at first planetary quantum level

E Kinetons are present in each 'sub kinetic coloumn' in the orbit of **Planet Mercury** in *first sub shell* **of first planetary quantum level.**

(**E/2**) kinetons are present in each 'sub kinetic coloumn' in the orbit of **Planet Venus** in *second sub shell* **of first planetary quantum level.**

(**E/3**) kinetons energy are present in each 'sub kinetic coloumn' in the orbit of **Planet Earth** in *third sub shell* **of first planetary quantum level**

The gravitational kinetic energy 'E' reduces by '**square of planetary quantum number,** at which the planet is placed'**.**

E/4 (E/2^2) at Planet Mars,

E/9 (E/3^2) at Asteroid belt,

**E/16 (E/4^2) at Planet Jupiter,**

E/25 (E/5^2) at Planet Saturn,

E/49 (E/7^2) at Planet Uranus,

E/81 (E/9^2) at Planet Neptune,

and E/100 (E/10^2) at Pluto.

Figure 1 Gravitational kinetic energy level in orbit decides the position of planets.

PLANETARY ORBITS (energy levels)
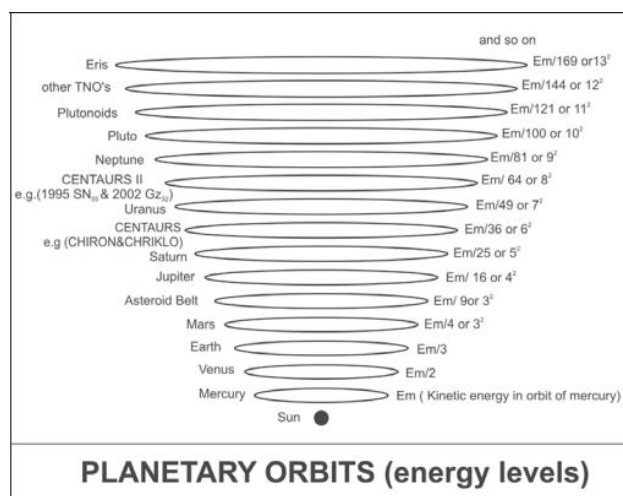
Name of planet	Energy level	Calculated gravitational kinetic energy v^2	Actual gravitational kinetic energy v^2
Mercury	E	$8.776444393 \times 10^{78}$	$8.776444393 \times 10^{78}$
Venus	$E/2$	$4.38822197 \times 10^{78}$	$4.696829258 \times 10^{78}$
Earth	$E/3$	$2.925481464 \times 10^{78}$	$3.397352232 \times 10^{78}$
Mars	$E/4(E/2^2)$	$2.194111098 \times 10^{78}$	$2.230118005 \times 10^{78}$
Cereus and Asteroid belt	$E/9(E/3^2)$	$0.975160488 \times 10^{78}$	
Jupiter	$E/16(E/4^2)$	$0.548527774 \times 10^{78}$	$0.653301797 \times 10^{78}$
Saturn	$E/25(E/5^2)$	$0.351057775 \times 10^{78}$	$0.356398183 \times 10^{78}$
Uranus	$E/49(E/7^2)$	0.1791111×10^{78}	$0.177026782 \times 10^{78}$
Neptune	$E/81(E/9^2)$	$0.108351165 \times 10^{78}$	$0.113015946 \times 10^{78}$
Pluto	$E/100(E/10^2)$	$0.087764443 \times 10^{78}$	0.0860632×10^{78}

$E/10^2$ Pluto

Plutinos– Orcus 90448(2004 DW), Luxion (2001 KX_{76}), 2202 Tx_{300} (55636), 2003 EL_{61} (136108)**,** Quaor 2002 LM_{60} (50000)

$E/11^2$ Cubewanos– 2005 FY_9 (136472), 2002 AW_{197}

Scattered disc objects–

E/12^2   2002 Tc$_{302}$, 2001 XR$_{190}$, 2002 YW$_{134}$,

E/13^2   **Eris** (2003 Ub$_{313}$) **Tenth planet**

E/14^2   2005 TB$_{190}$, 1996 TL$_{66}$ (15874),

E/15^2   2001 FZ$_{173}$, 1996 GQ$_{21}$,

E/16^2   2003 FX$_{128}$,

E/17^2   2004 PB$_{112}$,

Outer solar system

E/18^2   1999 RD$_{215}$, 2000 PJ$_{30}$,

E/21^2   2005 PU$_{21}$, 2003 HB$_{57}$,

E/24^2   2001 FP$_{185}$,

E/30^2   2004 VN$_{112}$,

E/35^2   Red Planetoid **Sadna** 2003 VB$_{12}$,

E/40^2   2002 OO$_{67}$,

E/49^2   2006 Sq$_{37}$

Table : Planets and Planetoids are placed at planetary quantum level

Em/50² (10X5)²

Em/49² (7X7)² 2000 Sq...

Em/40² (10X4)²

Em/40² (8X5)² 2000 oo..

Em/35² (7X5)² 2003VB.. SADNA

Em/30² (10X3)²

Em/30² (6X5)² 2004 VN...

Em/24² (8X3)² 2002GB..and 2005 CR...

Em/21² (7X3)² 2003HB..and 2005 PU..

Em/20² (10X2)²

Em/18² (6²X3²)

Em/17²

Em/16² 1999 RD... & 2000PJ.. Outer Solar System

Em/15² (5²X3²) 2004 PB..

Em/14² (118702) 2000OM..

(15874) 1996 TL..

2005 TB...
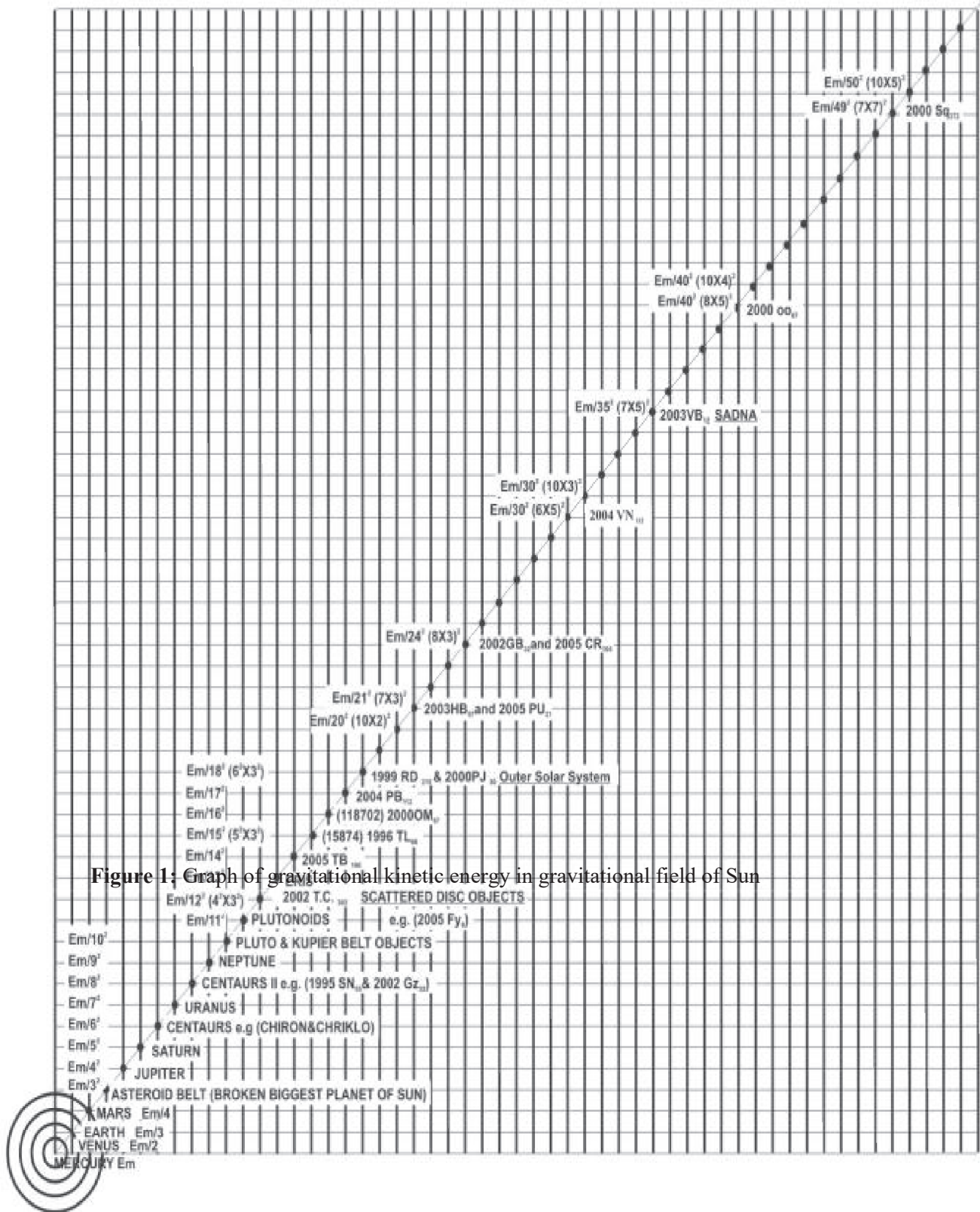
Figure 1: Graph of gravitational kinetic energy in gravitational field of Sun

Em/12² (4²X3²) 2002 T.C. ... SCATTERED DISC OBJECTS

Em/11² PLUTONOIDS e.g. (2005 Fy.)

Em/10² PLUTO & KUPIER BELT OBJECTS

Em/9² NEPTUNE

Em/8² CENTAURS II e.g. (1995 SN.. & 2002 Gz..)

Em/7² URANUS

Em/6² CENTAURS e.g (CHIRON&CHRIKLO)

Em/5² SATURN

Em/4² JUPITER

Em/3² ASTEROID BELT (BROKEN BIGGEST PLANET OF SUN)

MARS Em/4

EARTH Em/3

VENUS Em/2

MERCURY Em

Energy level in the orbit of planets as calculated by the energy level in resept to the orbit of mercury

Figure 2: Planets are placed at planetary quantum levels [copy right reserved, [10]

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Energy Levels in Orbit of Planets

All the planets condense in 10 planetary quantum levels In any gravitational field between 10^{4th} and 10^{5th} quantum level of fourth dimension.

Gravitational kinetic energy E_m reduces at 10 Planetary quantum levels in the planetary orbits by E_m/square of planetary quantum level number. (Here E_m is energy in the orbit of mercury).

At $10^{4\,th}$ quantum level from Sun, first planetary quantum number 'n_1'; in sub shells of one shell, Mercury, Venus, Earth are placed at K, L, M energy levels. While Mars is at 'N' energy level, which can also be leveled as 'n_2' or second planetary quantum level **'n_2'**.

First planetary quantum number 1 'n_1' level (in first sub shell), is at unit distance of 0.3×10^{46} bound treo layers from gravitational center of Sun (at K energy level of first quantum level) at which planet Mercury is placed, with gravitational kinetic energy E.

First planetary quantum number 1 (in second sub shell) at double the unit distance ($2 \times 0.3 \times 10^{46}$ bound treo layers) and E/2 energy (at L energy level) the planet Venus is situated.

First planetary quantum number 1 (in third sub shell), at three times the unit distance ($3 \times 0.3 \times 10^{46}$ bound treo layers) and E/3 energy (M energy level) the planet **Earth** is placed.

Similarly, at **planetary quantum level 2, 'n_2'**, at E/ $(2)^2$ i.e. four times the unit distance and at E/4 energy level the planet **Mars** is placed. (N energy level)

At **planetary quantum level 3, 'n_3'**, at E/ $(3)^2$ i.e. 9 times the unit distance and E/9 energy level the **Cereus** and **'Asteroid belts'**;

At **planetary quantum level 4**, **'n_4'**, at E/ $(4)^2$ i.e.16 times of unit distance the **Jupiter** with E/16 energy level;

At **planetary quantum level 5**, **'n_5'**, at E/$(5)^2$ i.e. 25 times the unit distance the **Saturn** with E/25 energy level and so on;

At **planetary quantum level 6**, **'n_6'**, at E/$(6)^2$ i.e. 36 times of unit distance the 1977 UB (CHIRON)/and 'CHRIKLO 1997 CU26 with E/36 energy level;

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At **planetary quantum level 7, 'n$_7$',** at $E/(7)^2$ i.e. 49 times of unit distance away the **Uranus** is placed with E/49 energy level.

At **planetary quantum level 8**, **'n$_8$'**, at $E/(8)^2$ i.e. 64 times of unit distance the planetoid "1995 SN 55" is placed with E/64 energy level.

At **planetary quantum level 9**, **'n$_9$'**, at $E/(9)^2$ i.e. at 81 times of unit distance away the **Neptune** with E/81 times energy level is placed.

While **Pluto** demoted from a full planet, is at **planetary quantum level 10, 'n$_{10}$'**, at $E/(10)^2$ i.e. 100 times of unit distance is placed. The Pluto with exactly E/100 energy level (and thus it compels us to re –consider the Pluto as a full planet instead of its demoted status of minor planet) **At 10^{5th} quantum level from Sun** $[(10^5)^2 \times 10^{38}$ layers$]$ in 10^{48} th bound treo layers in gravitational field of Sun the outer solar system exists.

Planetoids are placed at 18th planetary quantum level**, 'n$_{18}$'** i.e. **18th** (or 3×6) level and also seen at**, 'n$_{21}$' 21st** (or 3×7), and others are at **35th** (or 5×7), **24th** (or 3×8), **40th** (or 5×8), and at **49th** (7×7) planetary quantum levels.

It leaves following positions un -filled and it compel us to search (The Planetoid which are at 3×5 i.e. fifteenth and at 5×6 i.e. thirtieth planetary quantum level)

Conclusion

Thus the factors affecting the positioning of baby bodies in any gravitational field are found to be determined by geometry of gravitational fields as proposed in treo model.

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