International Journal of Science and Research (IJSR)
ISSN (Online): 2319-7064
Index Copernicus Value (2013): 6.14 | Impact Factor (2013): 4.438

An Idea of New System to Alert all Living Bodies before Earthquake

Nirmalendu Das

Assistant Engineer, All India Radio, Siliguri (Retd)
Life Member: THE VON KARMAN SOCIETY for Advanced Study and Research in Mathematical Sciences (VKS), Old Police line, Jalpaiguri, West Bengal(India), 2) Indian Science Congress Association, India.

Residential Address: MUKUL DEEP, Saratpally, W.No.- 40, 74/48, Meghlal Roy Road by lane Haiderpara, Siliguri – 734006, Dt: Jalpaiguri, West Bengal (India)

Abstract: ***The energy nothing but the number of photons. The number of photons changes means energy changes, energy changes means frequency or wavelength changes. Therefore, we can discover new types of frequency by experiment. All matter even Alpha, Beta, Gamma, Infrared, Radio, TV waves etc is made by photons, because, we know the Einstein equation, $E = mc^2$, E is indicating the total energy of matter (m). The earthquake is very sensitive and penetrating issue in our life. This really needs to find the actual reason to know before destroying fields. It is possible to calculate $0.101x10^4$ photons which are interlinked to all elements serially from atomic number to all. This bunch of photon can pass through earth plates and it may give signal earthquake effect before creating destructive situation by these photons in terms of frequency or wave. We need to think over it positively as we can save the life of all living bodies.***

Keywords: Mass of a photon, Φ′ photons, structure of electron, information through communication system before earthquake

1. Introduction

The average age of the current Earth's continental crust has been estimated to be about 2.0 billion years. Most crustal rocks formed before 2.5 billion years ago are in cratons. Such old continental crust and the mantle below it are less dense than other places in the earth. These are not easily destroyed when the plates shift. The making of new continental crust is linked to times of major orogeny or mountain building. This happens at the same time as the formation of the supercontinents such as Rodinia, Pangaea and Gondwana. The crust forms in part by the coming together of island arcs including granite and metamorphic fold belts. They are kept together partly by the using up of the mantle below the crust, which makes a mantle on which the crust can float. About 75% of the Earth's crust is composed of two elements, oxygen and silicon. These usually occur in combination with common metals such as aluminum and iron.

A single family of silicates, the feldspars, account for about half of the material in the crust (60% by weight) and quartz is a sizeable proportion of the rest. Other common minerals are mica and hornblende. Only 8% of the Earth's crust is non-silicate minerals, and this includes carbonates, sulfides, chlorides and oxides. The upper 16 km (10 miles) of the Earth's crust is composed of about 95% igneous rocks with only a thin, widespread covering of sedimentary and metamorphic rocks.

Major plates Depending on how they are defined, there are usually seven or eight major plates: African Plate, Antarctic Plate, Indo-Australian Plate, sometimes subdivided into: Indian Plate, Australian Plate, Eurasian Plate, North American Plate, South American Plate, Pacific Plate.[1].

After the 1989 Loma Prieta earthquake occurred, a group led by Antony C. Fraser-Smith of Standford University reported that the event was preceded by disturbances in background magnetic field noise as measured by a sensor placed in Corralitos. California about 4.5 miles (7 km) from the epicenter. From 5 October, they reported a substantial increase in noise in the frequency range 0.01–10 Hz. The measurement instrument was a single-axis search-coil magnetometer that was being used for low frequency research. Precursory increases of noise apparently started a few days before the earthquake, with noise in the range .01–.5 Hz rising to exceptionally high levels about three hours before the earthquake. Though this pattern gave scientists new ideas for research into potential precursors to earthquakes, and the Fraser-Smith et al. report remains one of the most frequently cited examples of a specific earthquake precursor, more recent studies have cast doubt on the connection, attributing the Corralitos signals to either unrelated magnetic disturbance or, even more simply, to sensor-system malfunction [2].

Many attempted has been taken to solve the problems, lot of examples are there, but true success yet not been found in this field. So, we need to solve getting information before earthquake to save life and damage of associate things. How we can solve this, need to entire into this chapter.

2. Determination of Time before Earthquake by Photonic Method

Let us think a stream waves like stream of neutrinos wave which can pass through rocks and can reflect from sensitive plate of earthquake to seismometer and which we may connect to all communication system. This type of waves will strike to earthquake materials and will change its path due to irritation problem just before happening earthquake. We may record this frequency by a recorder. So, it is need to search that type of frequency which can do this work. In my book “Endless Theory of the Universe (Complete Unified Theory)”, described matter, EMR, structure of electron etc

Licensed Under Creative Commons Attribution CC BY

by using bunch of photons. For example, for Hydrogen, $\Phi'_H = 0.101x10^4$ photons [3]. These photons are very important which interlinked in between elements to elements with atomic numbers. We can send this signal to deep in the earth. Because, all plates are composed of elements like Oxygen, Silicon, Aluminum, Iron and other elements. Now $0.101x10^4$ photons are common to all in forming elements. In terms of energy is, $\bar{\varepsilon}_H = 9.402877x10^{-19}$ ev ($\bar{\varepsilon}$ = energy of a photon = $9.309779229x10^{-22}$ ev, with respect to mass of a photon, $1.659619614x10^{-54}$ gm [4]) or in terms of frequency is $0.101x10^4$ photons x $\bar{\nu}$ =$2.2736x10^{-4}$ Hz or 0.00022736 Hz. (Where, frequency of a photon $\bar{\nu}$ =$2.251093763x10^{-7}$ Hz). Therefore, we can measure the time as 1 / $2.2736x10^{-4}$ Hz = 1 hour 13 sec. This time is better to inform public to alert from earthquake. Normally, seismograph records 0.5 to 10 Hz that is > 1 **Hz** [5]. In 1989, October, magnetic field density applied for 0.01 to 0.02 Hz signal, and recorded it. [6].

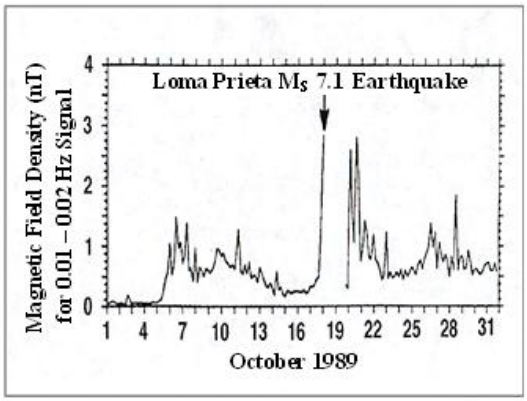


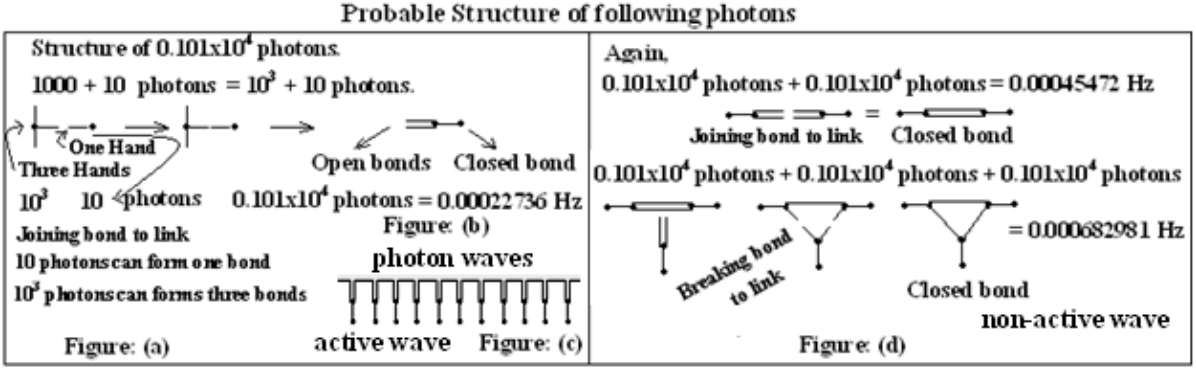
Figure: Loma Prieta earthquake signal taken at 0.01 Hz band.

All the energy bands from 0.01 Hz to 10 Hz demonstrated increases in energy, but this band (0.01Hz) was the most dramatic).

The scientist are trying to solve to get information before the earthquake, but succeed yet not been found fruitfully thereafter. The 2.2736 $x10^{-4}$ Hz frequency is 0.01 Hz / $2.2736x10^{-4}$ Hz = 43.983 = 44 times smaller than the 0.01 Hz. Therefore, it is possible to send this frequency to underground to earthquake plates to get more information which may save life and destroying effected things.

The probable structure of $0.101x10^4$ photons is given here from the photonic idea. Here, we may consider that 10 photons will able to form a bond, 1000 will 3 etc. in this way it is possible to determine the energy from the particle. So, we need to short discus for the new attempted on the photon`s characteristics.

Probable Structure of following photons



How we can get these $0.101x10^{-4}$ photons? Let us try to solve it.

In the field of Atom, if we consider all particles in two groups as [7]

1) e^-, p, n and subatomic particles like μ^+, k^+, π^+, Σ^+ etc

2) e^+ and subatomic particles like μ^-, k^-, π^-, Σ^- etc in an atom and then we get the followings:

$$\text{Let, } \Delta_1 = \mu^+ + k^+ + \pi^+ + \Sigma^+ \text{ etc } \ldots\ldots\ldots\ldots \quad (a)$$

$$\Delta_2 = \mu^- + k^- + \pi^- + \Sigma^- \text{ etc. } \ldots\ldots\ldots\ldots \quad (b)$$

Then, $\Delta_1 / \Delta_2 = \Delta'$ (some definite quantity)

If Δ_1 is related with the particles e^- , p and n (object portion) and Δ_2 is related with a particle e^+ (image portion), then we can write,

$$\Sigma_{atom} = \frac{(e^- + p + n)\ \Delta_1}{e^+\ \Delta_2} \ldots\ldots\ldots\ldots (c)$$

$$= \Phi\Delta'(e^+)^{-1}, \text{ where, } (e^- + p + n) = \Phi \ldots\ldots\ldots \quad (d)$$

$= \Phi\Delta' e^-$ where, Σ_{atom} = ratio between the object and image of atom.

3. How positron may convert into an electron?

Suppose, we chose a number 10 and in reverse condition, 1/10 (= 0.1). If 10 occupies in object portion and 1/10 in image portion, then, 10/ 0.1 = 10 x 10 = 100. Similarly, if electron (e^-) take position in object side and positron in image side, then, $e^- / e^+ = e^- \text{ x } e^- = e^{-2}$ may write. In the equation (d), we have taken Φ as ($e^- + p + n$) and then $\Phi\Delta'$ is expressing the combine particles electron, proton, neutron and subatomic particles. But $\Phi\Delta'$ with e^- as Φ x Δ' x e^- is

Licensed Under Creative Commons Attribution CC BY

giving idea that total particles of an atom symbolized by Σ_{atom}. A figure of an atom with subatomic particles is given here for an example [8].

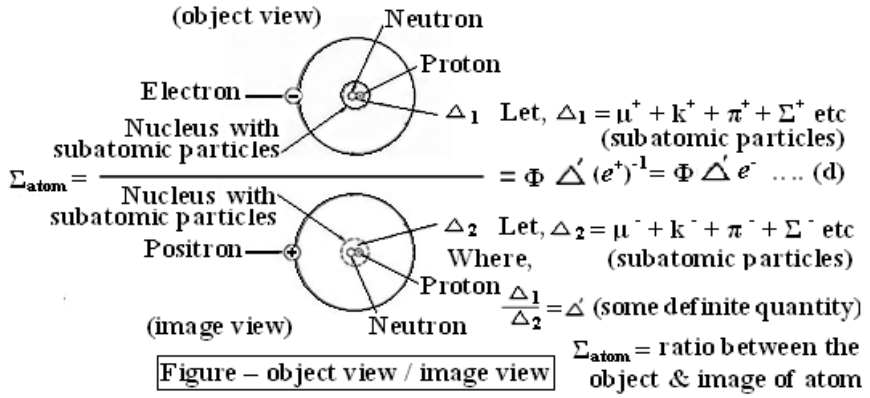


Figure – object view / image view

This figure tells us that, the reverse form of electron is positron or vice versa. That means, when electron will move in clockwise direction, it will behave as an electron and this will liberate energy. And when electron will move in anticlockwise direction, it will behave as a particle, positron. In this position, when two electrons will move both the direction simultaneously (that is one in clockwise & other in anticlockwise direction), then it will emerge gamma (γ) rays. Thus we can draw a figure, of emission of gamma rays (A New Process) [8]:

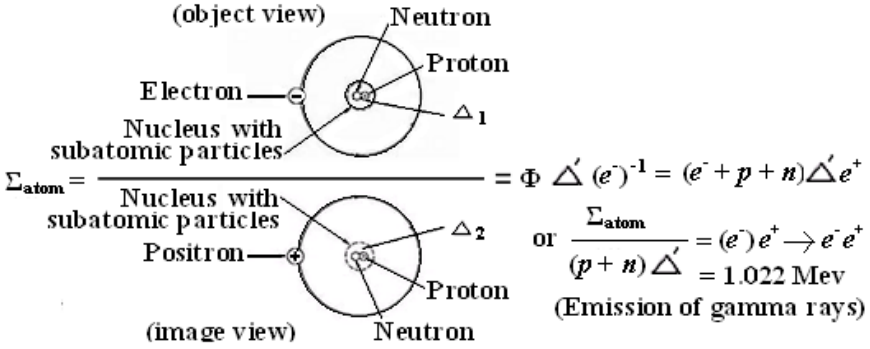


Figure - (Emission of gamma rays)

We have the equation of mass of a photon is [4]

$$\sigma = \frac{2h^2}{N_A m_u \lambda_c^2 c^2} = 1.659619614 \times 10^{-54} \text{ gm} \ldots\ldots\ldots\ldots (1)$$

If we replace the mass of atom (m_u) in above equation by the mass of electron (m_e) then the mass of a photon will increase, which means we will get the mass of some bunch of photons. So, the mass of this populated photons maybe denoted by σ_1, then [9],

$$\sigma_1 = \frac{2h^2}{N_A m_e \lambda_c^2 c^2} = 3.025301565 \times 10^{-51} \text{ gm} \ldots\ldots\ldots\ldots (2)$$

Or $N_A\sigma_1 c^2/ [e] = 1.021998139$ Mev (in terms of energy, γ) (2)

This is the energy of pair production of electron and positron ($e^- + e^+ = 1.022$ Mev). The ½ of the energy of the equation (2) is 0.510999 Mev or 0.511 Mev and this is the energy of electron. From the figure – gamma rays emission, we get, e^- x e^+ = 0.511 Mev x 0.511 Mev = 0.26112 Mev^2, then, $\sqrt{0.26112}$ Mev^2 = 0.511 Mev which is the energy of an electron. So, energy of two particles in combine is $e^- + e^+$ = 1.022 Mev. Again, from the view of the equation – 2, $N_A\sigma_1 c^2/ [e]$ is explaining that Avogadro's number (N_A) of populated photons (σ_1) in terms of energy ($c^2/ [e]$) is showing the energy of two electrons. Therefore, an electron is composed of ½ of $N_A\sigma_1$ number of photons whatever the particle is electron or positron. In this formation of particles, we can tell that an atom is composed of electron, proton, neutron, subatomic particles with Avogadro number of photons which takes place in the atom in the form of energy. Therefore, we can calculate the energy of particles and atomic weight of elements (known & unknown) by using the equation (d) in the following way:

If every particle within the atom is able to produce particular number of photons in excited state, then we will get some number of photons from that atom. If an electron, a proton, neutron is able to produce 1000, 10, 10 photons respectively, the we can write,

$\Sigma_{atom} = (e^- + p + n)\ \Delta' e^-$,
$= (1000 + 10 + 10)\ \Delta' \times 1000$
$= (0.102 \times 10^4) \times 10^3\ \Delta' = (\Phi') \times \Delta' \times 10^3$ photons …… (e)

Here, $\Phi' = (0.102 \times 10^4)$ photons for an element Deuterium atom as it has one electron, one proton and one neutron. The Hydrogen has electron and proton, so, its $\Phi' = (0.101 \times 10^4)$ photons. These photons are interlinked to all elements. This cause of formation of elements. If some amount of photons comes out from an element of atomic number Z and atomic weight m_0, then we will get,

Licensed Under Creative Commons Attribution CC BY

$\Sigma_{m_o} = N_A\, m_0\, \Phi'\Delta'\, 10^3$ / Z photons. …….. (f)

For any element,
$\Phi' = Ze + Zp + (A - Z)n = Z10^3 + Z10 + (A - Z)10$ photons...
(g)

Where, Z = e = p and n = A – Z
Again, we see that, $\Sigma_{m0} = m_0$ x m_u / σ = m_0 / N_A σ photons
(h)

From the equation (f) and (h) we get,
$\Phi'\Delta' = 1 / N_A^2\, \sigma 10^3 = 1.66146127 \times 10^3$
photons. = $1.54678376 \times 10^{-18}$ ev……. (i)
Knowing the value of Φ′Δ′ / Z, we can determine the total number of photons of any element.

1. For an example,
Atomic weight of Hydrogen = m_o = 1.0079 atomic mass unit (amu) and then,
$\Sigma_H = N_A$ x 1.0079 x 1.66146127 x 10^3 x10^3 photons = $1.008459071 \times 10^{30}$ photons. (Where, $N_A = 6.0221367 \times 10^{23}$ photons). Again, Σ_H = mass of Hydrogen / mass of a photon = 1.0079 amu / $1.659619614 \times 10^{-54}$ gm = $1.008459071 \times 10^{30}$ photons. But, 1.66146127x 10^3x10^3 photons / 2(3/2) x $\bar{\varepsilon}$ = $6.31471826 \times 10^{-16}$ ev which is almost equal to Planck constant as $\hbar/[e] = 6.582122 \times 10^{-16}$ ev-s, where, $j = l + 1/2$, l = 1, then, j = 3/2 = angular quantum number and $\bar{\varepsilon}$ = energy of a photon = $9.309779229 \times 10^{-22}$ ev. So, Φ′Δ′ / Z is important for microscopic field of particles.

2. We know that, Φ = 3.7 x 10^{10} / 4π x 10^4 = 2.944366447×10^5 photons [10]. (π = 3.141592854), we can get these photons from the following way:
100 x √π x Φ′Δ′ / Z = 2.944863426×10^5 photons…..... (j).
Here the value of Φ′ ≈ Φ, varied after 1/1000th decimal numbers.

Therefore, the idea of Φ′ for emission of photon from atom is justified. Knowing the value of Φ′ from $\Phi' = Ze + Zp + (A - Z)n = Z10^3 + Z10 + (A - Z)10$ photons, we can calculate the value of Δ′ as,
$\Delta' = Z / \Phi'\sigma N_A^2$ x 10^3 = 1.62 …. Nearly constant for elements.

So, $\Delta' = \Delta_1 / \Delta_2$ = 1.62 …. Nearly constant, the ratio of subatomic particles as positive group / negative group. For higher atomic weight, Δ′ = 1.6204… the value of Δ′ is different for each element, it differs only in decimal value (0.62) after 1.62 etc. But for lower atomic numbers for,
1) Hydrogen (mass = 1.0079 amu), Δ′ = 1.645011158
2) Helium (isotopic mass = 3.01605 amu), Δ′ = 1.636907655
3) Deuterium (mass = 2.0141 amu), Δ′ = 1.628883598.

Gradually this value of Δ′ will decrease in decimal value when mass of element will increase. For example, mass of Radium = 226 amu, then, Δ′ = 1.620039798, from this verification, we may come to conclusion that Δ′ = 1.6 is constant for all elements. The values of Φ′ photons are given in table photons for all known and unknown elements [11].
Mass of 0.101×10^4 photons = 0.101×10^4 photons x mass of a photon (σ = $1.659619614 \times 10^{-54}$ gm = Mass of a photon) = 1.676215×10^{-51} gm, this mass is 1.80484 times smaller than the mass σ_1 (mass of populated photons) and Avogadro number of this mass is $1.00943958 \times 10^{-27}$ gm, this matter is composed of 6.082355×10^{28} photons, where, electron is composed of 5.48841915 x 10^{26} photons which is 110.8216 times larger than electron value and 1644.72 times smaller mass of an atom, and in terms of frequency it is 1.235494×10^{20} Hz. This new particle may use to detect other phenomena to solve many unsolved problems. We may treated this mass as interrelated mass of element to elements, thus it can pass through all types of rocks, plates etc. this mass is 1010 times larger than a photon mass, that is 1010 photons in terms of energy can pass through the earth`s plates. In my book, it has been calculated and found that electron is able to produce energy from the outer shell 9. Electron has 9 orbits, other 8 orbits are not so active like 9 number orbit, because, 8 orbits completed its structure by photons and no open hand is there, but in the case of electron, its one hand is open. How we can get this energy from the outer orbit of electron, this new system of liberation of energy has been given here for justification.

The Structure of An Electron [12].How we can confirm that a particle is able to emit or absorb photons? (For example: Structure of electron is mentioned here which is unknown till now).

To search this above answer, we can take electron for an example. If we can find out how many times heavier is electron than a photon that is how many photons are responsible in creating an electron than the resulting knowledge can be applied in different field of science. We can write,

Number of photons in any substance = mass of substance / mass of a photon.
So, photons are present in electron = mass of electron / mass of a photon.
Let, $\Sigma_e = m_e / \sigma$ = 0.548841915 x 10^{27} photons = 0.548841915 x $(10^3)^8$ x 10^3 photons = 0.5109990641 x 10^6 ev (Total energy of electron)…….. (3).

Binary's number uses 0 and 1 which helps to make computer data likewise, if we consider, one zero represented by 1 then in a 1000, there are three zeroes. If three zeroes are represented by three ones and treated it as one bond, then 1000 will bring three bonds as follows.

$$1000 \text{ photons} = \overset{111}{1000} = 10^1 \times 10^1 \times 10^1 = (10) \times (10) \times (10) \times (10) = (10^3)$$

$$\text{Or } \Sigma_e = 0.548 \times (10^3)^9 \text{ photons} = 0.548 \times -10.\ -10.\ -10.\ -10.\ -10.\ -10.\ -10.\ -10.\ -10$$

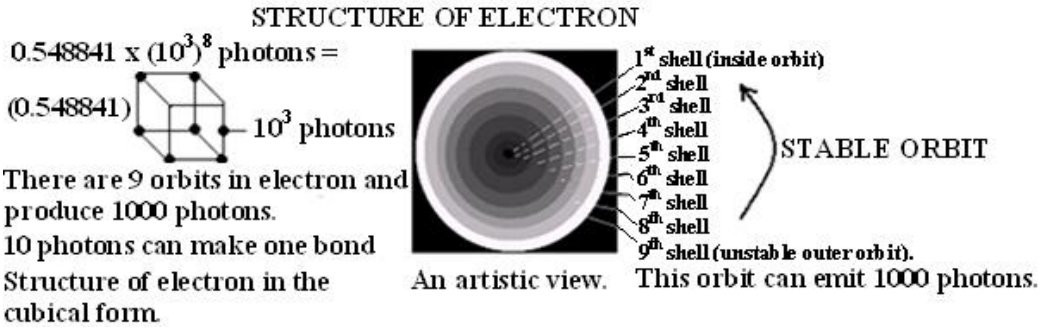
= 0.548x-10=10=10=10=10=10=10=10=10- (outer bond or hand).

When, the electron is made up of by 0.548841×10^{27} or 0.548841 x $(10^3)^8$ x 10^3 photons, then, 10^3 photons will able to make bond as $1000 = 10^3 =$ ⊢ and $(10^3)^8$ photons will produce bonds as:

$(10^3)^8$ photons = ⊢ x ⊢ x ⊢ x ⊢ x ⊢ x ⊢ x ⊢ x ⊢
$(10^3)\ (10^3)\ (10^3)\ (10^3)\ (10^3)\ (10^3)\ (10^3)\ (10^3)$

Licensed Under Creative Commons Attribution CC BY

If $(10^3)^8 = 10^3 \times 10^3 \times 10^3$…… to 8 factors is represented by a cube, then 0.5488841915 x 10^3 photons out of 0.5488841915 x 10^{27} photons will take place in any one bond made by $(10^3)^8$ photons. The structure of electron is unknown to us.



If $10^3)^8 = 10^{24}$ photons are being engaged in forming the shape of an electron, then we can write,
Residual photons = Σ'_e = 0.548841915 x $(10^3)^8$ x 10^3 x 10^3 – $(10^3)^8$,
= [0.548841915 x 10^3 – 1] x $(10^3)^8$
= 547.84195 x 10^{24} photons ……. (4)

Somerfield expression: According to Somerfield, the expression for the energy and electron moving in a region of uniform potential is given by,
$E = h^2k^2 / 8\pi^2 m$ …….. (5), where, k = wave number of particle = $2\pi / \lambda$
For an electron, let $m = m_e$, $\lambda = \lambda_c$ = 2.42631058 x 10^{-10} cm (Compton wavelength of electron). Then, K = 2.589604711 x 10^{10}. So the above equation brings, E = 0.2554995364 x 10^6 ev. It is ½ of the total energy of electron. So, from the equation (3) and (5), we get for total energy of electron is:

$E = 2h^2k^2 / 8\pi^2 m_e = \Sigma_e$ (total photons of electron) or $h^2 / 4\pi^2 m_e = \Sigma_e / k^2$ …… (6) But Σ'_e the residual photons emits 1000 photons at excited state and acts with quantum number ($j = l \pm ½$)
as a function of $\sqrt{j} = \sqrt{(l \pm ½)}$, l =1 that is if we put $\sqrt{3}/2\ \Sigma'_e$ in place of Σ_e in R.H.S of the equation (6), then we will get,

$(\sqrt{3}/2 x \Sigma'_e) / k^2 = \sqrt{3}/2$ x 547.8841x10^{24} / (2.589604x10^{10}) = 1.000x10^6 photons……. (7)

L.H.S of this equation (42) is showing $h^2 / 4\pi^2 m_e$, in it $h/2\pi$ factor is known as the spinning of photon. Therefore, for escape of photons from an electron, the equation (7) will turn to:

$\sqrt{}\{(\sqrt{3}/2 x \Sigma'_e) / k^2\}$ = 1000.3079 photons …… (8)

We can omit the decimal fraction, and then we can come to the point that an electron can emit or absorb 1000 photons at excited state of it. Where we can use these 1000 photons which may come out an electron? Let us try to solve this problem to give some examples.

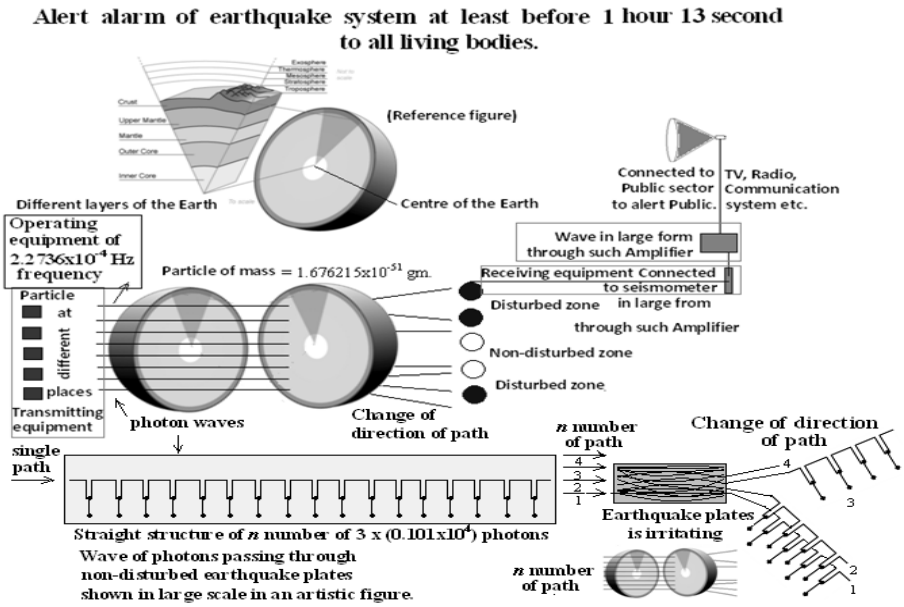
4. Application of 1000 photons

Determination of energy by using 1000 photons from an electron which will similar to Eigen value of electron as follows:

Energy of an electron = (1000 photons) x (energy of a photon) / {2 [$\sqrt{(3/2)}$] x Å^2} = 38ev at zero point energy ……(9)
Where, energy of a photon = $\bar{\varepsilon}$ = 9.309779x10^{-22} ev and 3/2 is the angular quantum number (l=1) and we can write Å as l also which scientist Eigen used this l as length. But the Eigen value of energy [13] of electron at zero point is 37.6 ev, $E_n = n^2 \pi^2 \hbar^2 / 2m\ l^2$= 37.6 ev (when, n= 0, E_n= 0).

In the microscopic field of particle, this value is important. So, it is possible to detect earthquake before few hours ago. If we sent this particle such a way, and when the particle will feel disturb, the characteristic of particle will sure give signal from that stage of creatable earthquake. A figure is given bellow:

Licensed Under Creative Commons Attribution CC BY



This figure is hypothetical, though if we try to experiment, it must give result to solve getting before information of earthquake.

If we apply this energy to earthquake sensitive animals, we may get result of it. We may compare the behavior of this very small energy to neutrino as neutrino can pass through all bodies through earth. But when this energy will strike to irritated earthquake plate in the deep earth, it will disturb and will change its path which we can measure its variations and count time when the earthquake will be happened underground. Like weather report system, it will possible in future to give information to public to alert before happening the earthquake. The scientists are trying to solve this problem, but till now no scientist successes to give correct information in time.

References

[1] Crust (geology) - Simple English Wikipedia, the free ...simple.wikipedia.org/wiki/Crust_(geology). The average age of the current Earth's continental crust has been estimated to be about 2.0 billion years. Most crustal rocks formed before 2.5 billion years ago are in cratons. Such old continental crust and the mantle below it are less dense than other places in the earth.

[2] Earthquake prediction - Wikipedia, the free encyclopedia *en .wikipedia .org /wik I /Earthquake _prediction* [3,7,8,9,11,12, 13] N. Das, Endless Theory of the Universe. LAP LAMBERT Academic Publishing, Website: https://www.lap-publishing.com/, ISBN-13: 978-3-659-53597-0, P -182, 178, 179, 32, 204, 35, 39.

[3] N. Das, International Journal of Science and Research (IJSR). Impact Factor (2012): 3.358 Volume 3 Issue 6, June 2014, www.ijsr.net , ISSN (online): 2319-7064.

[4] DURATION OF STRONG GROUND MOTION www.iitk.ac.in/nicee/wcee/article/5_vol1_1304.pdf

[5] Larger earthquakes (greater fault breakage), duration of higher frequency. (> 1 Hz) horizontal waves ... ground motion with uniform intensity per unit time (about half D for large M) as ... f is frequency (in Hz), c is wave velocity and Q is the mean.

[6] Science Brief: Ultra-low Frequency (ULF) Pulses https://www.quakefinder.com/.../science-brief-ultra-low-frequency-ulf-p...Figure 1 Loma Prieta earthquake signal taken at 0.01 Hz band. ... “uni-polar pulses” that occurred typically around 1-10 times a day on a normal day, to over ...

[7] Harald Enge, Introduction to Nuclear Physics, Massachusetts Institute of Technology, Addition Westley publishing Co, Tenth printing(1981), P – 39

Licensed Under Creative Commons Attribution CC BY