Conversion of Kinetic Energy into an Electromagnetic Pulse by means of Control of the Gravitational Mass

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It is shown a system that, if launched radially into the Earth's gravitational field, it can acquires a ultra high amount of kinetic energy, which can generate a highly intense pulse of electromagnetic energy (EMP) with magnitude of the order of 10 Megatons or more.

Key words: EMP, Kinetic Energy, Gravitational Mass.

In a previous paper we shown that the intensity of the local gravity can be controlled by means of a device called Quantum Controller of Gravity (QCG) [1]. Fundamentally, a QCG can have any spherical form (ellipsoidal, spherical, spherical cylindrical, etc.). Figure 1 shows a system with 1 (one) spherical QCG (shell with thickness Δx).

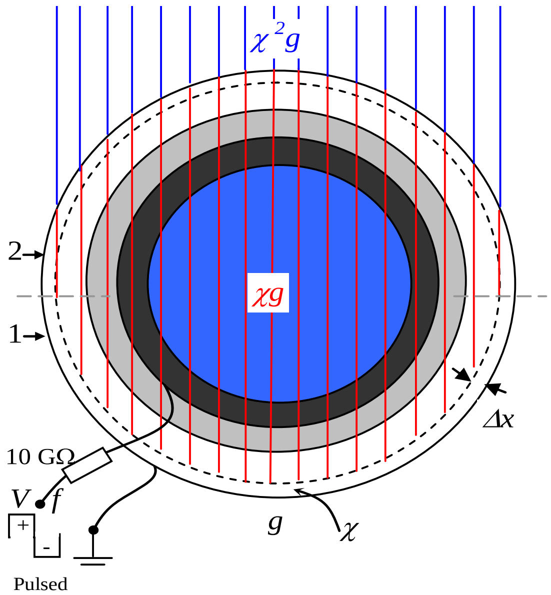

Fig.1 – The shell with thickness Δx works as a *Quantum Controller of Gravity*.

As show in the figure above, the gravity in the blue spherical region becomes χg, where χ is the expression of the correlation between gravitational mass and the rest inertial mass of the QCG, which is given by [1]

$$\chi = \frac{m_g}{m_{i0}} = \left\{1 - 2\left[\sqrt{1 + 2.64 \times 10^{-3} V} - 1\right]\right\} \quad (1)$$

where V is the voltage applied (See Fig.1).

It is possible to build a system with n concentric QCGs (See schematic diagram in Fig. 2.). In this case, the gravity inside the system becomes $\chi^n g$ [2]. Thus, if the rest inertial mass of the nucleus of the system (in blue) is $m_{i0(nucl)}$, and the system is launched from a height H into the Earth's gravitational field, then the weight of the system[1] becomes $P_{(sys)} = m_{g(sys)} g = \chi^n m_{i0(sys)} g \cong \chi^n m_{i0(nucl)} g$, and it will acquire an acceleration $a = \chi^n g$.

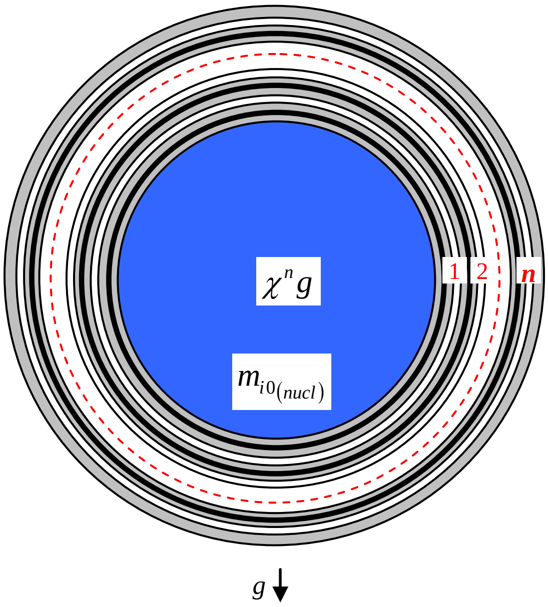

Fig. 2 – A system with *n* QCG

[1] Since the n spherical capacitors are too thin, then the total inertial mass of them is very less than the inertial mass of the *nucleus* of the system. Then, we can write that $m_{i0(sys)} \cong m_{i0(nucl)}$.

Then, the velocity v of the system, at the distance h (starting from the launch point (zero point). See Fig. 3), is $v=\sqrt{2ah}=\sqrt{2\chi^n gh}$, and the time interval to go from the zero point down to the end of the height h is given by $t=\sqrt{2h/\chi^n g}$. At this point, the kinetic energy of the system will be $E=\frac{1}{2}m_{g(sys)}v^2=\frac{1}{2}\chi^n m_{i0(nucl)}v^2$. Therefore, if at this moment the QCGs *are turned off*, then the gravitational mass of the system will sudden reduce to its inertial mass. Consequently, the system will release, in the form of a *high-power electromagnetic pulse*, an amount of energy ΔE

$$\Delta E=\frac{1}{2}\left(m_{g(sys)}-m_{i0(sys)}\right)v^2\cong\frac{1}{2}\chi^n m_{i0(nucl)}v^2=$$
$$=\frac{1}{2}\chi^{2n}m_{i0(nucl)}gh \qquad (2)$$

For example, if $n=6$; $\chi=-8.25$ (obtained from Eq. (1) for $V=11.6kV$); $m_{i0(nucl)}=10kg$; $g=9.8m.s^{-2}$ and $h=10km$, then the released energy is

$$\Delta E=\frac{1}{2}\chi^{2n}m_{i0(nucl)}gh=4.8\times10^{16}J\cong10\,Megatons \qquad (3)$$

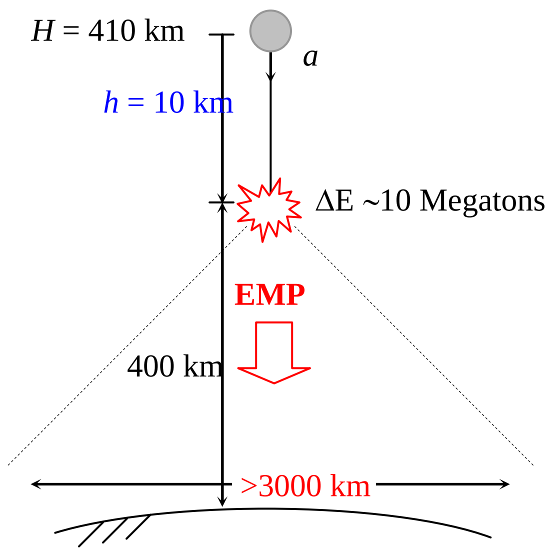

Fig. 3 – EMP of ~10 Megatons produced by the sudden conversion of kinetic energy into electromagnetic energy.

In this case the velocity of the system at the end of the 10km distance is

$$v=\sqrt{2\chi^n gh}=1.3\times10^8\,m.s^{-1}\cong0.4c \qquad (4)$$

With this velocity the inertial mass of the system increases to

$$m_{i(sys)}=\frac{m_{i0}}{\sqrt{1-\frac{v^2}{c^2}}}\cong1.1m_{i0(sys)} \qquad (5)$$

On the other hand, the traveling time of the system (from the zero point down to the end of the10 km distance) is

$$t=\sqrt{2h/\chi^n g}=0.14ms \qquad (6)$$

This time interval is insufficient for that the friction with the rarefied atmosphere heats significatively the system.

References

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