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 acquire 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]

\[ \chi = \frac{m_g}{m_{i0}} = \left[1 - 2\sqrt{1 + 2.64 \times 10^{-3}V} - 1\right] \] (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 χng [2]. Thus, if the rest inertial mass of the nucleus of the system (in blue) is m_{i0(nuc)}, and the system is launched from a height H into the Earth’s gravitational field, then the weight of the system becomes

\[ P_{(sys)} = m_{g(sys)}g = \chi^nm_{i0(sys)}g \approx \chi^nm_{i0(nuc)}g \]

and it will acquire an acceleration

\[ a = \chi^ng. \]

Fig. 2 – A system with n QCG

\[ \chi^ng \]

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 \( m_{i0(sys)} \approx m_{i0(nuc)} \).
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 \( E = \frac{1}{2} m_g(n_{sys})v^2 = \frac{1}{2} \chi^n m_{0(nuc)}v^2 \).
Therefore, if at this moment the QCGs are turned off, then the gravitational mass of the system will suddenly reduce to its inertial mass. Consequently, the system will release, in the form of a high-power electromagnetic pulse, an amount of energy \( \Delta E \)
\[
\Delta E = \frac{1}{2} (m_{g(nuc)} - m_{0(nuc)})v^2 \approx \frac{1}{2} \chi^n m_{0(nuc)}v^2 = \frac{1}{2} \chi^n m_{0(nuc)}gh
\]
For example, if \( n = 6; \chi = -8.25 \) (obtained from Eq. (1) for \( V = 11.6kV \); \( m_{0(nuc)} = 10kg \); \( g = 9.8m.s^{-2} \) and \( h = 10km \), then the released energy is
\[
\Delta E = \frac{1}{2} \chi^n m_{0(nuc)}gh = 4.8 \times 10^6 J \approx 10 \text{ Megatons} \tag{3}
\]
In this case the velocity of the system at the end of the 10km distance is
\[
v = \sqrt{2\chi^n gh} = 1.3 \times 10^8 m.s^{-1} \approx 0.4c \tag{4}
\]
With this velocity the inertial mass of the system increases to
\[
m_{i(syn)} = \frac{m_{0(i)} \chi}{\sqrt{1 - \frac{v^2}{c^2}}} \approx 1.1 m_{0(syn)} \tag{5}
\]
On the other hand, the traveling time of the system (from the zero point down to the end of the 10 km distance) is
\[
t = \sqrt{2h/\chi^n g} = 0.14 ms \tag{6}
\]
This time interval is insufficient for that the friction with the rarefied atmosphere heats significantly the system.

It is easy to see that the mentioned system can be launched into outer space (or in an orbit of Earth) by itself. It is sufficient activates only one QCG of the system. In this case, the gravity on the nucleus of the system becomes \( g \). Then, for \( \chi < 0 \) the direction of the gravity acting on the nucleus becomes opposite the direction of the Earth’s gravity (\( g \)), and consequently the system leaves the Earth’s surface and climbs. Thus, by controlling the value of \( \chi \) it is possible control the ascending speed of the system.

In addition, by using retrorockets it is possible to put the system, for example in an Earth’s synchronous orbit.

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

\( H = 410 \text{ km} \)
\( h = 10 \text{ km} \)
\( \Delta E \sim 10 \text{ Megatons} \)
\( EMP \)
\( 400 \text{ km} \)
\( >3000 \text{ km} \)

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1 Without use of a rocket.
2 Synchronous Orbit — An orbit in which a satellite has a velocity synchronized to the speed of the rotation of the earth and thus remains above a fixed point on the earth’s surface.
References
