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22 - Mass, light and Gravity in Unitary space-time— (Part II)

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Using the quantum group gravity theory (Double Spectrum digraph), we focus the quantitative relationship between inertia masses and rest masses under gravity effects, we found successfully:

1. The quantum coherent parameter in the dual group of a H atom (a proton and an electron) is an exact rational number. The quantum coherent parameter in the triplet group of a neutral baryon (three neutrinos) is also an exact rational number, but the value increases to 3 times.
2. Even so in the different quantum topology context, the conserved-gravity conformal manifold is homeomorphic; the phase change law is same one. We found also that the spinors of fundament particles induce mass growth or drop and control the ratio integer.
3. The derived Gravity-Yang-Baxter Equations rigorously characterize that the above quantum gravity behavior of the dual groupoid, the triple groupoid and the multi groupoid, and struct a full equivalent quantum gravity Hom-space algebra with same characters. The kernel of quantum gravity structures is the dual or conjugate representation. The rest spectrum structure is deterministic Hermitian matrix, but the dynamic transition as flip is random non-abelian structure.
4. This unitary gravity time-space ensemble, and its fundamental parameters, are a stable conserved-gravity conformal holography. Then, our revealed dynamics of quantum gravity can same used for Planck-scale fundamental particles and macro-scale Universe. From phase transition under gravity, we furtherly proved that our obtained new Newtonian gravitational constant is reliable and true.

It means that the explicit exact functions between mass and energy exchange are already obtained. Mass is the space occupied by a graviton at an instantaneous time.

Author: Prof. LUAN, zhi-an (china petroleum university hua-dong)

Presenter: Prof. LUAN, zhi-an (china petroleum university hua-dong)

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