



Canadian Association
of Physicists

Association canadienne
des physiciens et physiciennes

Contribution ID: 2419

Type: **Poster (Non-Student) / Affiche (Non-étudiant(e))**

21 - Mass, Light and Gravity in Unitary Space-Time

Tuesday, 4 June 2019 16:45 (2 minutes)

We are surprised to find that the major open questions that plague modern theoretical physics can be answered in the mysterious "I Ching" book, by which our understanding on Mass and Gravity is:

(1) The triplets of particle mass, electric (or magnetic) charges, light and gravity are natural representations of quantum groupoid in unitary space-time (XTX). Mass "m" is a static topological measurement of this XTX, and light speed "c" is a dynamic topological measurement for it. The coherent states of quantum groupoids is dominated by gravity behind the scenes, gives rise to the next generation and form a reproductive chain.

(2) By split and recast nonlinear Schrodinger and Laplace operators, we cast a Double Spectrum Digraph (DSD) ensemble, which is a quantum group version of the ancient I Ching, which can accurately locate inertial mass, White or Black Holes, critical points of phase transition, and flip points. Its 8x8 non-Hermitian R-Matrix carries almost all the quantum information and envelops all the quantum evolutions. By the derived new generation subgroup as an example, we give the analytical images of growth and annihilation of the dual mass under gravity.

(3) We find three different quantum tunnels in each hexagonal honeycomb structure, which exactly describe: trivial spin, dynamic spin and coherent spin. Dynamic spin just is instantaneous collision, coherent spin is induced by gravity to form outer spin. We find the law of quantum coherence:

Sum of mass-velocity² = Product of mass-velocity² = Id.

(4) We discover a new gravity mode, which suits to quantum states of a mass triplet: fusion, coherence and separation, by which we found the theoretical values of gravity constant G.

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

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

Session Classification: DTP Poster Session & Student Poster Competition Finals (4) | Session d'affiches DPT et finales du concours d'affiches étudiantes (4)

Track Classification: Theoretical Physics / Physique théorique (DTP-DPT)