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Short Communication

The Geometric Effect of Space-Time Bending is the Result of Quantum Torque Synchronization

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The spontaneous synchronization in nature has been valued and studied for decades of years (All together now ...Nature: News and Views Page 557, Vol. 350. 18 April 1991).

Mathematicians have been trying to solve the problem: "How does order emerge out of chaos". However, there is no deep tendency toward order in nature; there is no the law of chaos. In reality, all the synchronization in nature is counterintuitive: order is disorder; disorder (chaos) is order according to the point of view of thermodynamics. When oscillators with different frequencies, higher frequency means faster and higher energy level, lower frequency means slower and lower energy level, this situation looks "disorder", however, it is order: higher energy level tends to flow to lower energy level, just like cups of hot water and cold water, entropy is low. When oscillators synchronized to the same frequency, all the oscillators share the same energy level, looks this situation is "order", however, it is disorder: the energy level of all differential units of all oscillators is evened up, just like cups of water with the same temperature, entropy reaches the maximum. Thus, all the synchronizations in the nature are spontaneous processes and precisely obey the second law of thermodynamics. The mathematical description of synchronization is simply $\Delta S>0$ and $\Delta S=0$ (S is entropy). For any oscillating systems, from not synchronized to synchronized is spontaneous process ($\Delta S>0$); as long as synchronization is spontaneously established, one's energy input is everyone's energy output; everyone's energy input is one's energy output, the system tends to be energy conservatively beneficial and stable, the entropy reaches the maximum ($\Delta S=0$).

Based on reversal of the concept, where there is an oscillation, there must be synchronization. Electron cloud outside of nuclear is the result of synchronization of all electrons of all energy states, every electron lose its individuality, its obit, its original energy level and become a part of the whole; solar light is also the result of synchronization of seven color spectrums, photons with different wave length from 400 nm to 760 nm are synchronized to the average energy state of 580 nm, the golden yellow color.

Diffraction, dispersion, refraction and superposition etc. wave behaviors, in classic optics could be explained by synchronization of all quantum particles involved. The most bizarre single- electron double-slit experiment is the result of symmetrical synchronization of energy sharing between a single electron and the electron clouds at the edges of the two slit. Synchronization is a constant and continuous energy sharing process: one quantum radiates its energy to every other quantum; every other quantum radiates energy back to the each individual at the speed of light.

All the oscillators in synchronization are just like in a light speed virtual rigid network, one quantum affect all quanta; all quanta affect one quantum. There is no individuality of each quanta, it is lost in quanta cloud which may stretch to the end of the universe. Without extra energy input this entropy maximum situation won't be desynchronized. Observer effect is due to the test photon, and that for sure is the "extra energy input".

When quantum is synchronized, Heisenberg's uncertainty principle is right, one quantum is sharing its energy with everyone quantum, the position and momentum of the quantum are uncertain; when the quantum is independent, all quantum information can be determined: there are two particles in one cycle of quantum oscillation, and the shape of the particle is fusiform according to the fluctuation of momentum, the particle and particle separating points are at the top and bottom of a sine wave where kinetic ener-

gy=0 and potential energy= maximum. When the quantum is synchronized, the individual is a part of the whole and Schrödinger's cat is a question of probability. However quantum synchronization is not randomly occurred, energy is arranged according to Newton laws and the second law of thermodynamics. Einstein is right that God does not roll the dice, and Einstein's hidden variable is spontaneous quantum synchronization.

The space-time bending dose not start from mass, it starts from quantum's oscillating spin angular momentum: torque ($\tau=r F \sin\theta$ in the speed of light. The torque of up quarks and down quarks causes the mass and torque of protons and neutrons; the torque of protons and neutrons determines the torque of the electron cloud outside the nucleus. The electron cloud occupies overwhelmingly of an atom space and synchronization of electron clouds thus the matter's torque in the universe becomes an inevitable phenomenon, simply because of the law: $\Delta S=0$.

Synchronization of torque involves the fluctuation and exchange of the electrons energy levels, the emission and reception of photons become the normal routine of energy exchange between objects that interact. Due to the participation of photons, time expansion and ruler shrinkage effects are ruling. Exchanging photons at same time, same amount in the opposite directions does not experience time. That means synchronization is just like quantum entanglement, before one's photons light up, they have already accepted by the others and vice versa. This can explain the abundant existence of dark energy and dark matter. Also we see the shadow of long-sought "graviton".

The deflection of light is the result of interaction between the torque of the photon and the torque of electron cloud of the objects on the path; the movement of the earth around the sun is the result of interaction of the torque of the earth and the torque of the sun. The expression of general relativity: matter tells space-time how to bend, and space-time tells matter how to move, can be interpreted: the action torque is equal to the reaction torque, and the strength is the same, the direction is opposite. The action and reaction are mediated through "dark" photons in no time. Newton's law of gravity supports the idea of over-distance action, and Newton is right.