THEORY OF HARMONIC PROPAGATION OF CONDENSED MATTER

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Abstract

In this article we offer to enhance the standard model of a bosonic superconducting cosmic string (fig 1) and model it in our **quantum harmonic system** (fig. 2).

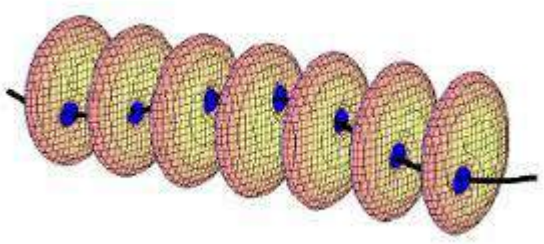

Fig. 1

Elaboration

Accordingly, and contrary to the common bosonic string model in fig 1, we model our ultracold hollow cylindrical superstring (fig 2) as a spacetime piercing string integrated into a succession of external counter-rotating magnetic fields. (Compare with the spacetime piercing ability of neutrinos and their left-right counter-spinning ability).

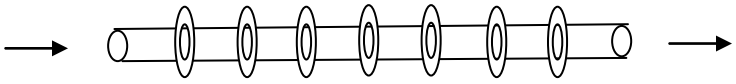

Fig. 2

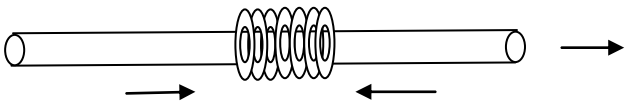

Fig. 3.

Our tunneling superstring system in fig. 2 consists of the open left entry to trap fermionic atoms in the vortex core, harmonizes them in vertex by shifted counter-rotating magnetic fields to unify them in a superimposed magnetic field in quantum squeezejunction (fig 3) and anti-gravity, and then superconducts them via superstring's right exit in mass propagation. The system in fig 3

functions similar to a musical squeezebox harmonika or accordion (see image below) which expands and contracts its bellows by using trapped air to create pressure and vacuum and produce musical sounds.

Accordion

Similarly to accordion functions, our quantum harmonic system in fig. 3 shifts external magnetic fields back and forth over ultracold particles of matter trapped and compressed in the vacuum tube of the superconducting superstring. In the lab, such a system can be represented by the vacuum tube with numerous counter-rotating electromagnets sliding back and forth over the tube and its trapped ultracold particles. To make this system work as a cold fusion reactor, we would direct the particles beam from our **quantum harmonic generator** into the chamber with liquid helium and neon to interact there with solar neutrinos.

Our quantum model represents the classical and quantum motion of photons, etc. in a rotating string. The spin motion per Bargmann-Michel-Telegdi equation is considered in the rotation tube and rotating system in acceleration of charged particles. In fact, neutral particles photons, neutrons, etc. can be accelerated by rotating tube. The specific characteristics of the mechanical systems in the rotating framework follow from the differential equations describing the massive body in the noninertial systems. (Landau, 1965).

Let be the Lagrange function of a point particle in the inertial system as follows:

$$L_o = \frac{m v_0^2}{2} - U$$

with the following equation of motion

$$m \frac{dv_o}{dt} = \frac{\partial U}{\partial r'}$$

Conclusion

Because our ultracold superstring is nonrelativistic, it is not constrained to the multidimensional spacetimes in which superstrings are usually studied in high-energy physics. It is the first **harmonic condensed matter system** proposed, where superconductviity in **macroscopic quantum phenomena** can be studied experimentally. Accordingly, our theory and model enable to create a **superfluid plasma system**, a **quantum electromagnetic nanoturbine** for cars, aircrafts and power stations and **quantum generator** for portable cold fusion energy based on experiments. In further application of our technology, new class of vehicles can be operated in levitation and superfluid propulsion.

The eternal question: why cosmic strings aren't detected by gravitational waves, is answered in assumption that in a quantum state, such mini strings never meet or spark, and function at zero point gravity, in anti-gravity or repelling gravity. Such cosmic mini strings create mini black holes, and hence cannot be detected by gravitational waves. When twin superstrings of matter create a macroscale black hole, as explained in our 11 pp. **Theory of Unified Matter**, we might detect them by gravitational waves.