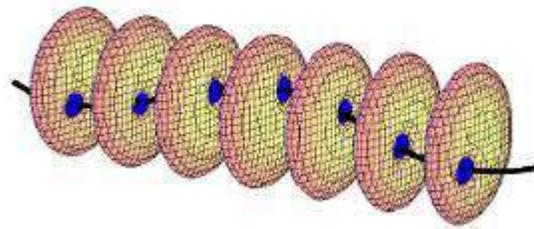


# THEORY OF HARMONIC PROPAGATION OF CONDENSED MATTER

© 2015 by Prof. Solomon Budnik  
budnik1@013.net  
s.b0246@gmail.com

## Abstract

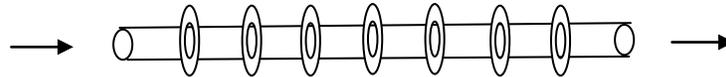
In this article we offer to enhance the standard model of a bosonic superconducting cosmic string (fig 1) and model it in our **quantum harmonic system** (fig. 2).



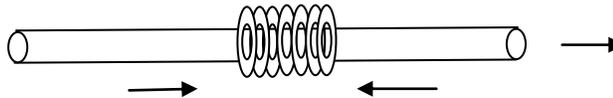
**Fig. 1**

## 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 tank with liquid helium and neon to interact there with solar neutrinos.

### 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 superconductivity in **macroscopic quantum phenomena** can be studied experimentally.

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 **Theory of Unified Matter**, we might detect them by gravitational waves.