Superconductivity, passive-rotation and levitation.

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July 2019

Abstract:

The forces of nature are reviewed and analyzed from first principles, without any pre-conceptions. The review is based on the earlier analysis of Energy Fields around conductors, solenoids, permanent magnets and rotating bodies **[1]**. In this paper, we develop further proposals for interactions between energy fields. The results may provide an alternative explanation for passive-rotation and also for super-conducting-levitation and Cooper Pairs.

1. Introduction:

Simple physics experiments have been conducted over the centuries and elaborate theories have been proposed to explain the observations (e.g. magnetic and electro-magnetic theories). These theories have become dominant and, in the modern era, they generally go unchallenged. This paper re-examines some fundamental aspects of physical behavior and proposes alternative explanations for the interactions in nature.

For this paper, we develop proposals for more complex interactions between energy fields. We build on the findings of two earlier papers **[1][2]** where energy fields are seen to interact with each other, and to turn or move, if free to do so. Energy fields are seen to move to positions of lower net field strength, which are also the configurations for lower total energy.

In the laboratory, the potential energy field between two bodies is small. On a planetary scale, the potential energy field and orbital energy field are are seen to be dominant. At the sub-atomic scale, the rotational energy field is perhaps more dominant.

Note: Whereas rotational and orbital energy fields appear to be bi-directional, the potential energy field appears to be uni-directional, at least within our solar system.

2. Passive interaction of energy fields:

From the interaction of energy fields discussed in earlier papers[1][2], we can examine the behavior of a passive, non-magnetic disc or sphere, adjacent to a "powered" non-magnetic disc or sphere. We have seen that active energy fields will move to positions where the strength of the total net energy field is minimized. This will also be where the total net energy is minimized.

For a passive object placed close to an active (powered) rotational energy field, the passive object is seen to turn slowly in a direction which creates an **additive** energy field, which will tend to push the objects apart - see Figure 2:

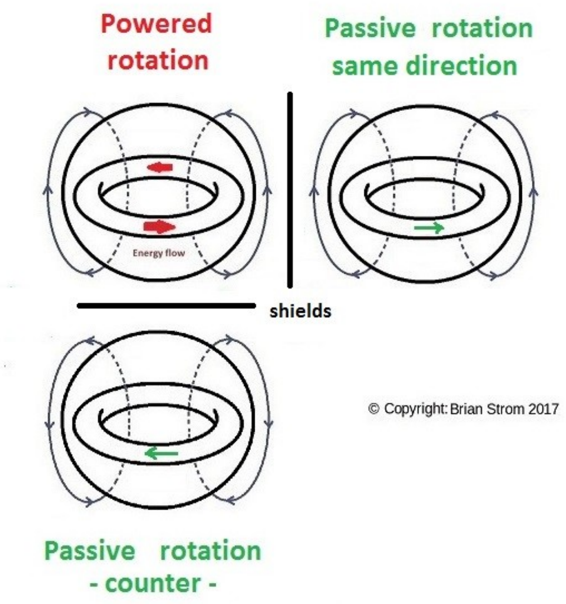

Figure 2: Passive reaction to an active energy field.

3. Superconductivity and passive interaction of energy fields:

If the (non-magnetic) passive object is cooled to a super-conducting condition, the energy field in and around the passive object will be much stronger. The net energy field between the objects will be much stronger. The passive object will turn faster and the two objects will tend to move further apart to reduce the strength of the energy field between them - see Figure 3a:

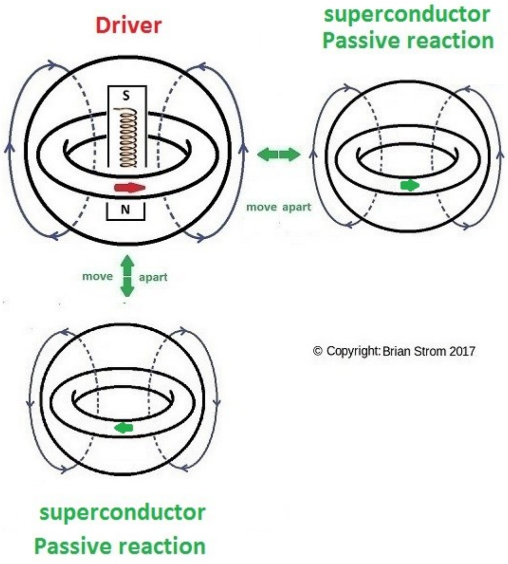

Figure 3a: Superconductor – strong passive reaction to an active energy field.

This movement can be demonstrated if the driven rotational object is replaced by a permanent magnet, when the experiment will show the familiar phenomenon of **LEVITATION**, as the energy fields of the driven and passive objects push each other apart - see Figure 3b:

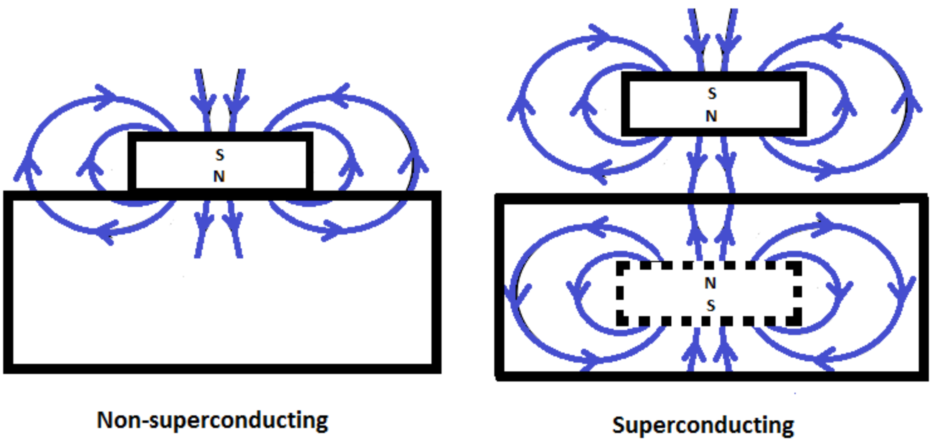

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Figure 3b: Magnetic levitation with a superconductor.

4. Interactions between Electrons: proposal for Cooper Pairs:

From the two earlier papers [1][2], we deduced that pairs of electrons with *parallel* energy fields will be in a minimum energy position, and therefore in stable equilibrium, when in an end-to-end configuration.

We also deduced that pairs of electrons with *anti-parallel* field vectors will be in a minimum energy position, and therefore in stable equilibrium, when in a side-by-side configuration – see Figure 4a:

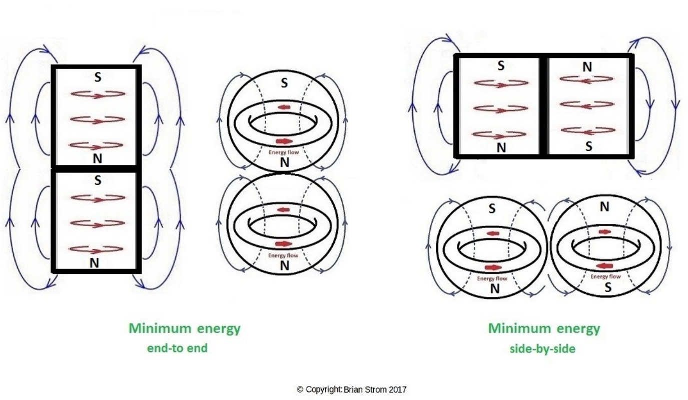

Figure 4a: Configurations for two electrons.

If we now analyze the situation where the pairs of electrons are also **orbiting** each other, the combined potential, orbital and rotational energy fields can be considered.

If the orbital direction and rotational direction are in the same sense (e.g. both clockwise when viewed from below), the orbital and rotational energy fields will be subtractive in the central area and, therefore, the weaker net field will mean the equilibium orbital diameter is smaller.

Within an atomic lattice, as the temperature of the material is reduced towards Absolute Zero, we can imagine that the strength of the orbital energy field will reduce. The relationship between the two energy fields will vary and there will be a point where the two fields cancel out in the area between the two electrons – see Figure 4b. Also see Figure 4c as an epicyclic diagram:

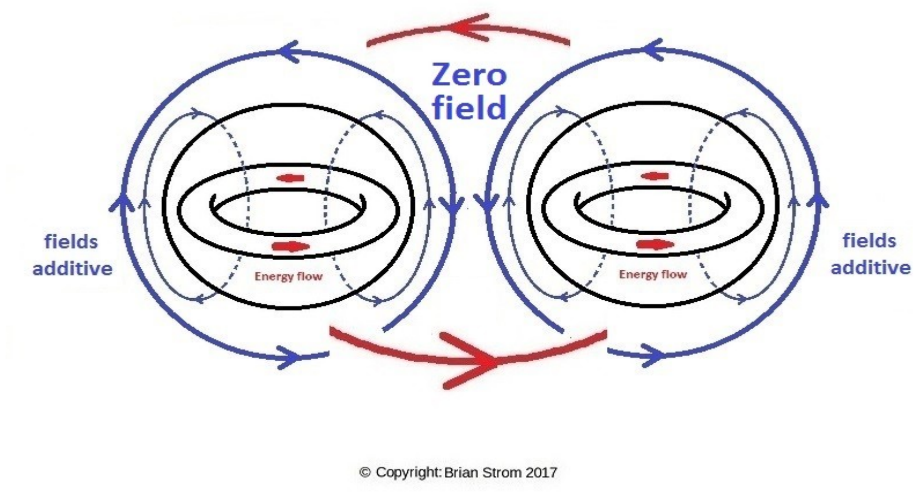

Figure 4b: Net energy field between the two electrons can become zero.

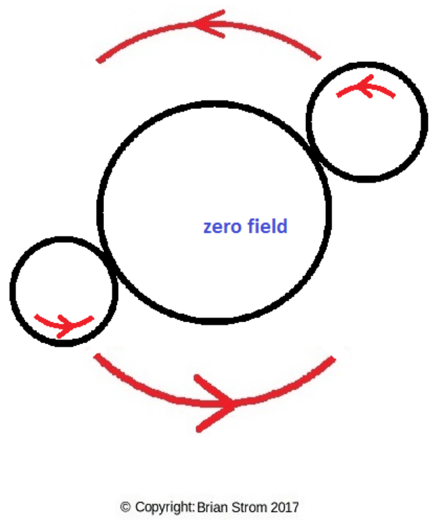

Figure 4c: Epicyclic representation of zero net energy field between the two electrons.

If the orbital direction and rotational direction are in the opposite sense (e.g. when viewed from below), the orbital and rotational energy fields will be additive in the central area and, therefore, the stronger net field will mean the equilibium orbital diameter is larger.

Within an atomic lattice, as the temperature of the material is reduced towards Absolute Zero, we can imagine that the strength of the orbital energy field will reduce. The relationship between the two energy fields will vary and there will be a point where the two fields cancel out in the area around the two electrons – see Figure 4d. Also see Figure 4e as an epicyclic diagram:

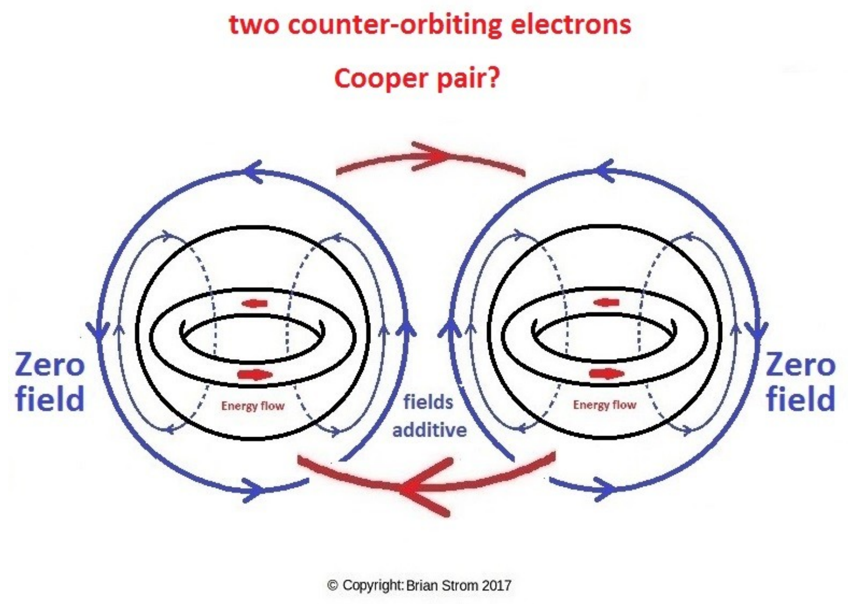

Figure 4d: Net energy field around the two electrons can become zero.

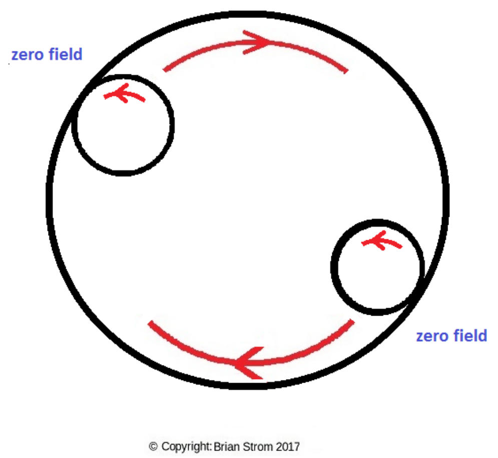

Figure 4e: Epicyclic representation of zero net energy field around the two electrons.

We see that pairs of electrons can exist in a number of different configurations within an atomic lattice. The net energy field between a pair of electrons, or surrounding a pair of electrons, can vary with temperature. Where the net energy field is low or zero, the movement of a pair of electrons through an atomic lattice (when a potential gradient is applied) will be relatively unimpeded. This may explain the nature of Cooper Pairs in superconductivity theory.

5. Summary and Conclusions

In this paper, we have analyzed advanced interactions between potential, orbital and rotational energy fields, and proposed the nature of these interactions on a sub-atomic scale.

We have not used any historic physics theories involving concepts that cannot be observed. The proposals for the interaction of energy fields are not dependent on the old physics theory of "charge" and "magical orbits".

The strengths of energy fields appear to vary by orders of magnitude, yet the sizes and distances between bodies can also vary by orders of magnitude. Whilst one or other energy field may appear to dominate, it does not mean that other energy fields are not present, at lower strengths.

Within the atom, the orbital and rotational energy fields may be strongest and temperature dependent, whilst the potential (gravitational) energy field may be insignificant.

These results may provide an alternative explanations for the "conventional" forces at the sub-atomic level, for passive-rotation, superconductivity and Cooper Pairs.

Further information available on Blog: https://edisconstant.wordpress.com/

6. References:

[1] Brian STROM. "AI Physics – Energy Fields - Part 1." **viXra: 1902.0421** February 2019. This paper includes a summary of the simple interactions between energy fields.

[2] Brian STROM. "AI Physics – Energy Fields - Part 2." **viXra: 1903.0495** March 2019. This paper includes a summary of the interactions between Potential energy fields, Orbital energy fields and Rotational energy fields.