Appeal of decision to reject manuscript BG14421

Dear Editorial Board member,

I am hereby appealing the editorial decision to reject my submitted manuscript BG14421.

The manuscript was rejected on the recommendation of three referees. My appeal is based on the fact that the only thing the three referees agree on is that my paper should not be published. But they give completely different and sometimes conflicting physics arguments for their recommendation. And their arguments are all wrong. I have provided earlier responses to the first referee's first report and to the second referee's report. With this appeal I am also submitting responses to the first referee second report and to the third referee's report.

The fact is, the referees have only read parts of my paper, and they have not understood my paper. For example, they have not even read Sect. IX where I show that for the phase transition, the variable amounts of Joule heat generated in different ways of doing the process is entirely consistent with thermodynamics when carefully analyzed in detail. Yet the same arguments for processes below the superconducting transition temperature yield results inconsistent with thermodynamics. The inconsistency cannot be resolved within the conventional theory. Certainly none of the referees explains how it can be resolved.

## In a nutshell:

The first referee says my paper is wrong because "The heat reservoir and the superconductor coupled to it are not a 'closed system' ". The referee is wrong, they are a closed system, as explained in my response.

The second referee says my paper is wrong because "the superconducting condensate shorts the connection". That is clearly wrong, as explained in my response. It also contradicts what the first referee says.

The third referee says (paraphrasing) "The same arguments of the author for a gas in a gravitational field predict that hydrodynamics is wrong. Since hydrodynamics is right, the author is wrong." I say the referee's mechanical analogy is faulty, for the reasons given in my response. This referee also said "This leads me to conclude that the above argumentation" (the one in my paper) "must be wrong, most probably in some subtle sense which I am not able to identify clearly."

Even if my paper is wrong "in some subtle sense which I am not able to identify clearly", as the third referee said, I say it should be published so some Phys. Rev. B reader can read it and identify that subtle reason. That will be a service to science. I am convinced that won't happen, but will certainly be happy to accept it if it does.

Thank you for considering this appeal.

Jorge E. Hirsch