**ANSWERS TO COMMENTS ON THE MANUSCRIPT [24]**

**(“ICE”, BELARUSIAN AYPT TEAM)**

**Answers to reviewer 1:**

*Q1.* *The time/wire diameter dependance consists of only 3 points. This data is*

*definitely not enough to confirm the theory. The values of time/wire diameters*

*of the figure 3 are not the same as in the table 1. It is not clear why the author*

*didn't plot the additional points from the table 1.*

A1. The data in the Table 1 are describing behavior of the copper wires, which does not correspond to our theory; that is why I’ve decided not to put plots of it, but just show on several points, what is wrong. I have expanded explanations on this matter in the revised article.

*Q2. In the improved theory, when the author tried to account for heat exchange*

*between a wire and environment, he estimated the temperature inside the*

*wire (T/2) and the distance between the points with the air temperature and*

*one with T/2 (y approx. equals to 3 cm). It would be really good to mention*

*how the experiment was conducted.*

A2. I have added explanations about these experiments.

**Answers to reviewer 2:**

*Q1.* *What is the Regelation effect?*

A1. Added explanations about regelation, as well as requested references.

*Q2.* *While writing the equations for heat, what assumptions do you make about*

*your system (is it closed, isolated, subject to energy dissipation? is the system*

*placed in a refrigerator and is it important, etc.).*

A2. Added requested information to the revised aricle.

**Answers to reviewer 3:**

*Q1.* *I cannot agree that all the energy gained by freezing of the water will flow back down via the wire. Especially, if the wire does not have a good heat conductance (the first wires used), the theory will not work.*

A1. Figure 3 of the revised article proves otherwise. And, even despite that, losses of heat are taken into account in the improved quantitative model.

*Q2. The last equation seems be more meant as a joke – some of the parameters are not described, most of them are unknown.*

A2. I have tried to describe and explain all parameters in the revised article.