The following list refers to the comments sent by the Editor, Dr. Ken Carslaw in the email of July 7, 2015. Comments are indented and are in italics and the responses are in nomad typeface.

Change the title to Technical Note: Ice nucleation terminology (i.e., just remove draft number)

The title we propose is: "Technical Note: A proposal for ice nucleation terminology". Inclusion of the word "proposal" is in accord with the tenor of the paper but it can be left off if the Editor prefers.

- *Add a short introduction to the purpose of the note and the topic of ice nucleation. Your current "General" section should be renamed Introduction and expanded. I would expect this to be about 1 page. It should start with something like "The purpose of this Technical Note is to…".*

Done. Introduction is the first section. The section "General" is used to include terms that refer to both homogeneous and heterogeneous nucleation.

- *Change all units "sec" into s, which is SI.*

Done

- *Remove colons at the end of subsection titles*

Done

- *Section 2.2. The equation Jv=(1/V)(1/N)… needs to be clearer. N seems to refer to number of nucleation events (numerator) and to number of unfrozen droplets (denominator). If you put a minus sign in front then this equation can be rewritten in terms of N_u, the number of unfrozen droplets.*

Rewrote the equation for J_v using N_u. Did the same for R in the following paragraph.

- *Section 3.4: I think this section would be better written in terms of the SITE DENSITY, and then refer to the distribution within the text. At present it is a rather confusing mix of the two. I don't understand the term "frequency distribution" because I think you mean density distribution. Frequency seems to imply the time domain until one reads the text, when it becomes clear that you are referring to a probability.*
    - *In the second paragraph you say "The distribution of sites, or integrated site density…" Are these meant to be interchangeable uses of the term? One is the distribution and the other is the integral of the distribution, so I don't understand what is intended.*
    - *What does "by some value of temperature" mean. This seems to require knowledge of how freezing experiments are performed – i.e., by cooling down to "some temperature". Please see if this can be made clearer.*
    - *In the third paragraph there are lots of undefined symbols. They may be in the table, but it would help to have them here too. Is K(T) the same as k(T)?*

While the use of frequency distribution has the advantage of indicating that there are sites of different kinds with corresponding abundance, site density is accepted as it is shorter, concise and often used in the literature already.

"Integrated site density" was introduced by Connolly et al., referring to integration over temperature in cases of steady cooling. Reworded the paragraph slightly to indicate the historical context.

The words ‘some temperature’ have been replaced by the more explicit “by the time some temperature or supersaturation has been reached”.

The quantities k(T) and K(T) are now named in the paragraph.

- *3.8.3. Is the characteristic rate C arbitrarily chosen by the experimentalist?*

Yes. There is no a priori reason for the selection. We indicate that 1 s-1 is a convenient choice.

- 3.10: Bogdan raises an important point here: You state that the concentration and type of solute is important for freezing, while Koop shows that it is just the activity that matters. So some improvement in the text can be made. Please also clarify “magnitudes of the induced changes” by adding “in nucleation rate” or “freezing temperature” etc, depending on what you intend.

The wording has been changed in (4.10). However, we feel that the water activity approach can't be taken as valid for all systems. There is evidence for cases where both the type of solute and its concentration have to be specifically considered. More could be said about the topic, but since no clarifications of terminology are introduced in this section we tried to keep this section concise.