

Response to reviewer #1.

“The authors should state the following in the Introduction or Conclusion
The order of correlation function for the iteration approach has been limited to $n=2$ in this paper. The order $n=3$ is complicated and has not been studied. Did Torquato’s group perform calculations beyond $n=2$? Please comment ?”

The information about the limitation $n=2$ is in Section 2, in Section 3, and in Section 6 (the conclusion). To make it more explicit we have amended (bold face) the conclusion as follows:

“Nevertheless, the SCE as presented in TK21 is even more general than applied here (**isotropic medium and truncation at $n=2$**), paving the way to further improvements. For instance, the calculations of the higher terms of the series ($n>2$) **is complicated but** should extend the validity range to higher frequencies and/or coarser-grained snow, provided that more detailed microstructure information could be obtained ...”

TK21 does present the theoretical equations with all the orders n . It also derives specific equations for $n=2$ only, and addresses some numerical issues for $n=2$ – which proved to be crucial for our numerical implementation – but not beyond ($n>2$). This is why further mathematical / numerical work is required to apply this theory for $n>2$. In addition, collecting the relevant information on microstructure in the case of snow is a specific problem, as discussed in the aforementioned sections.