

Anonymous Referee 3:

The authors did great improvements to the paper, congratulations. I suggest to the authors to add the measurement period to the methods section, and not only to the results. I also suggest that they replace the sentences 'higher than ever before' appearing in the abstract and main text to the actual size resolution in nm for example 'providing a size distribution of nanoparticles (3–60 nm) with a high size resolution of xx nm'.

Answer: As suggested by the reviewer, we added/clarified the measurement period to the Methods section and related sentences. Also, we omitted 'with a higher size resolution than ever before' in the Abstract, and it was replaced by 'with a lower size limit than before' in the main text, which is what we intended to say.

Page 1, line 13-14 in the Abstract:

“We conducted continuous measurement of nanoparticles down to 3 nm size in the Arctic at Mount Zeppelin, Ny Ålesund, Svalbard, from Oct 2016 to Dec 2018, providing a size distribution of nanoparticles (3–60 nm) ~~with a higher size resolution than ever before.~~”

Page 3, line 72-75 in the Introduction:

“In this study, we measured number size distribution of nanoparticles down to 3 nm for the first time at Zeppelin station, and obtained continuous size distributions of 3–60 nm particles every 3 min from Oct 2016 to Dec 2018. This allowed the size distribution of nanoparticles to be determined ~~with a higher size resolution than ever before~~, enabling better identification of whether freshly nucleated particles formed on-site or were transported from other regions after substantial growth.”

Page 3, line 89-92 in the Methods:

“The dominant wind patterns (east and southeast from the Kongsvegen glacier (40%) and northwest from the Kongsfjorden channels (14%) during the measurement period (Oct 2016 to Dec 2018)) and elevation suggest that the effects of local sources on the Zeppelin Observatory are small (Beine et al., 2001).”

Page 3, line 357-358 in the Conclusions:

“We examined the characteristics of Arctic NPF at the Mount Zeppelin site by conducting continuous measurements of nanoparticles down to 3 nm size from Oct 2016 to Dec 2018.”