

Interactive comment on “Urediospores of *Puccinia* spp. and other rusts are warm-temperature ice nucleators and harbor ice nucleation active bacteria” by C. E. Morris et al.

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The rates of ice nucleation activity of urediospores of rust reported here have the same utility as the rates reported for other biological ice nucleators. To parameterize a cloud model, one needs values of concentrations of ice nuclei at given (or a range of) temperatures. Therefore, the values reported in our manuscript need to be linked to measures of atmospheric concentrations of urediospores at cloud altitude. In fact, there are many more examples of data for atmospheric concentrations of urediospores than for the bacterium *Pseudomonas syringae*, for example, because of the historical importance of this group of fungi (the rusts) as plant pathogens. Measures of atmospheric concen-

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trations of this group of fungi began in the early 1900's and continue today because of the important epidemic risks they pose, particularly for wheat world-wide.

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