

Supporting data for the manuscript “Agricultural Harvesting Emissions of Ice Nucleating Particles”

- **Creator(s)** - Kaitlyn J. Suski^{1*} (author, researcher), Tom C. J. Hill¹ (co-author, researcher), Ezra J. T. Levin¹(co-author, researcher), Anna Miller²(co-author, researcher), Paul J. DeMott¹(co-author, Principal Investigator), and Sonia M. Kreidenweis¹(co-author, Senior Personnel)

¹Department of Atmospheric Science, Colorado State University, Fort Collins, 80523, USA

² Reed College, Portland, OR 97202 USA

*Now at Pacific Northwest National Laboratory, Richland, 99354, USA

- **College, School, Department, Lab, or Center** – Department of Atmospheric Science Colorado State University
- **Description** - All data used in the manuscript “Agricultural Harvesting Emissions of Ice Nucleating Particles” are provided here. These data were collected during a series of field studies in Kansas and Wyoming during harvesting of various crops in 2014 and 2015. Ice nucleating particle and biological particle concentrations were measured as well as the chemistry of ice nucleating particles collected downstream of the CFDC.

Abstract - Ice Nucleating particle (INP) concentrations were measured with the Colorado State University Continuous Flow Diffusion Chamber (CFDC) and the Ice Spectrometer (IS) during the harvesting of various crops in Kansas and Wyoming. Real-time heating was used to determine the percentage of organic and mineral components that make up the INPs. Post-treatments of IS samples were also used to isolate the heat-labile and heat-stable organics, and bacteria from mineral INP components of wheat emissions. Concentrations of biological particles were made in real time with a Wideband Integrated Bioaerosol Sensor (WIBS). The CFDC, IS, WIBS, and SEM-EDX data used in this paper is included in this archive.

- **Subject/Keywords** - Ice Nucleation, CFDC, Harvest, Soil Dust
- **Sponsorship** – The study was funded by NSF grant AGS1358495. Anna Miller was funded by the Reed College Opportunity Fellowship.

More details about specific datasets can be found in additional README files in the respective folders.