Bacterial Ghost Platform Technology

Anchor

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Ice Nuclei Importance

- Nucleation
 - Primary formation of Ice particles in clouds
- Homogeneous Nucleation
 - Statistically probable below -40 °C
- Heterogeneous Nucleation
 - Ice nuclei act as foreign particles.
 - Reduce energy barrier for forming ice embryo.
 - Nucleation closer to equilibrium temperature.
- Types of Heterogeneous Nucleation
 - Contact Nucleation -
 - Condensation/Immersion Nucleation -
 - Deposition Nucleation



Ice Nuclei Sources (Bacterial)

- Most known ice nuclei nucleate at -15 °C or lower.
- There are natural (dust) and anthropogenic sources.
- Bacterial ice nuclei are important.
 - Pseudomonas syringae
 - Erwinia herbicola



Research at UND

- Harrison Rademacher MARC U-STAR Scholarship (Cirrus Cloud Measurements)
 - AMS Conference January 2019
- Julie Hibarger NSF REU (Surface **Bacterial Measurements**)
- Frida Garcia NSF REU (Laboratory **Bacterial Measurements**)
- Alexa Otto MARC U-STAR Scholarship (BG Laboratory Measurements)
 - EGU Conference April 2018
 - AMS Conference January 2018



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