

## **NASA IMPACTS Field Project: Introduction to Measurement Systems**

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**Abstract:** The Department of Atmospheric Sciences is offering a graduate course, Measurements Systems, during the Fall 2022 semester. For the eighth time, Dr. David Delene will be teaching the course. The presentation objective is to give a course introduction and overview of atmospheric measurements by discussing cloud micro-physical measurements conducted by the University of North Dakota (UND) as part of the NASA field project Investigation of Microphysics and Precipitation for Atlantic Coast-Threatening Snowstorms (IMPACTS). IMPACTS focuses on winter snowstorms on the eastern seaboard that cause major disruptions to transportation, commerce, and public safety. Snowfall in these storms are frequently organized in banded structures, which are poorly understood. To improve understanding of banded storm structures, IMPACTS obtains observations that identify key processes to enable improve understanding of remote sensing observations and modeling of the storms. UND is responsible for operating eight cloud microphysical probes. These suite of probe provide measurements of the cloud particle spectrum and liquid water amount.