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Title: The North Dakota Citation Research Aircraft Measurement Platform

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Abstract: The North Dakota Citation Research Aircraft is a Cessna Citation II twin-engine fan-jet aircraft modified to be an atmospheric research platform that has been used on many field projects since the 1970s. The Citation Research Aircraft was operated by the University of North Dakota (UND) for many years but is now operated by Weather Modification International (WMI) of Fargo, North Dakota. WMI and UND together provide a unique test facility that is capable of deploying a wide range of instrumentation in a cost-effective manner. The Citation Research Aircraft can sample at high altitudes (12.1 km (40,000 ft)) and has the ability to fly slow. WMI has the experience to install the custom instrumentation required for a specific field project and the expertise to conduct the most demanding aircraft sampling, including thunderstorm in-situ measurements. UND provides scientific know-how on obtaining measurements at the required accuracy and experience to ensure instruments are performing well. Robust, open-source software tested for over 15 years provides the ability to quickly process data to ensure projects obtain the necessary observations. The WMI/UND team has worked together on many projects to obtain data sets required to meet each project's scientific objectives. Past and on-going projects include working with large and small companies to test airborne instruments and conduct natural icing studies.