



MTDC Air Program News

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Remote Telemetry System



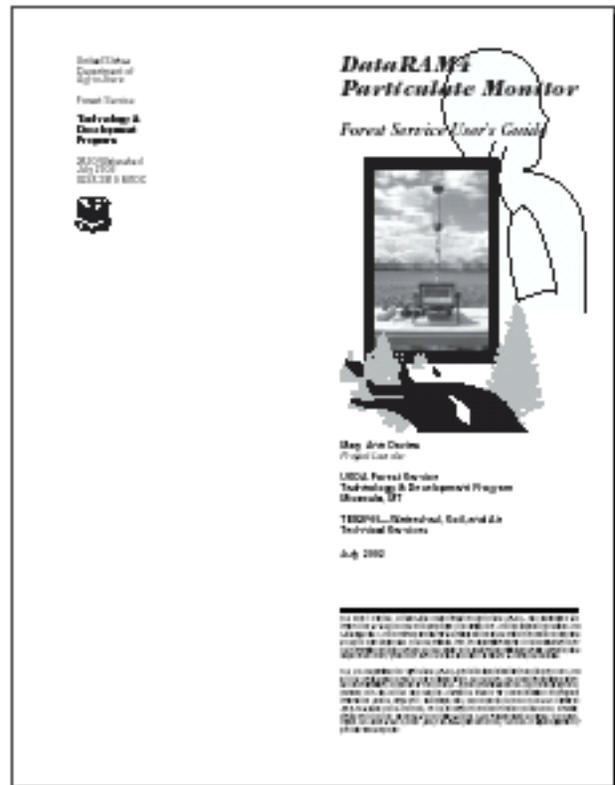
The remote satellite telemetry systems and Web site for the DataRams is in full operation now. The satellite telemetry systems were developed to transmit real-time data from the DataRams hourly and have the information posted on a web site for easy access. The Web site is <http://www.satguard.com/usfs1/> (user name: 101, password: 1). All the satellite systems have been delivered to the Forest Service cache located in Fort Collins, CO. A short report, [Remote telemetry system for particulate monitoring \(0225-2329-MTDC\)](#), more fully describes the remote telemetry system.

DataRam User Guides

MTDC has completed user guides for both the DataRam 2000 and the newer DataRam 4.

The user guides were developed for employees with little or no experience in operating the particulate monitors. The guides step employees through the basic operation, setup, placement, and configuration of the DataRAMs to monitor smoke from prescribed burns and wildland fires. The guides also describe how to download data from the instruments and how to operate the instrument when using the satellite telemetry system. The user guides are available electronically on the Forest Service's internal computer network:

- [DataRAM 2000 Particulate Monitor: Forest Service User's Guide \(0225-2803-MTDC\)](#)
- [DataRAM 4 Particulate Monitor: Forest Service User's Guide \(0225-2810-MTDC\)](#)



Windshields for Precipitation Gauges and Improved Measurement Techniques for Snowfall

The center recently published a report, [Windshields for Precipitation Gauges and Improved Measurement Techniques for Snow \(0225-2325-MTDC\)](#), detailing our investigation of methods for measuring snowfall catch efficiency in wind events. The report describes different methods of capturing snow, including different types of windshields to provide greater catch efficiency. The Center is evaluating a new gauge that shows promise in increasing the catch efficiency. The new gauge uses a rotating ball, half-submerged in a glycol antifreeze mixture.



Low-Level Upper Air Temperature Sounding Instrument

The center hopes to develop an inexpensive instrument to estimate low-level winds during wildfires and prescribed burns. Fire and smoke managers need to know the temperature and wind speed of air in the lowest levels of the atmosphere to determine whether or not the meteorological conditions are suitable for successfully carrying out a prescribed fire, or to predict the behavior of a wildfire. A few fire and smoke managers use PIBALS (weather balloons) to estimate winds aloft, but the cost of adding a commercial off-the-shelf temperature sonde and ground tracking station is very expensive. Other managers use data interpolated from nearby National Weather Service upper air stations or data estimated from models. The upper air stations are of limited use because they are often far from the burn site and do not provide information about the lowest layers of the atmosphere, which determine how the smoke plume will rise and disperse.

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[Top](#)



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