



MTDC Air Program News

Issue 4

May 2003

Your Ideas for Projects are Needed!

We need your ideas for projects that will help us make your jobs easier and more efficient. The National Air Management Water and Riparian Technology and Development Program steering committee meets from June 23 to 25 to select new projects for the coming year. The committee includes Forest Service employees from across the country. If you have ideas for projects they should consider, please fill out our project proposal form or call Dick Karsky (406-329-3921) or Andy Trent (406-329-3912). We will submit your proposal.



[Download](#) printable proposal form (20K, Adobe Acrobat).

[Download](#) editable proposal form (29K, Microsoft Word).



Click the **icon on the left** to download a free version of Adobe Acrobat

Reader

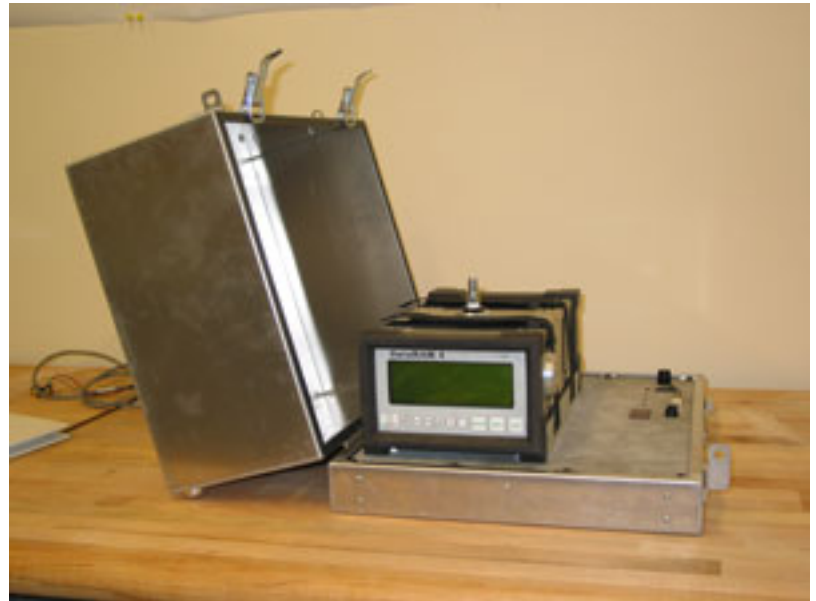
New DataRam Smoke Mass Concentration Correction Factor

Users of the MIE DataRam know that a correction factor must be applied to the estimated mass concentration for the most accurate results. MTDC developed the correction factor based on the old model of DataRam (DR2000). When the DataRam 4 was developed, the center recommended disabling the size-correction feature until the center completed further testing. During March 2003, the center completed testing in the Rocky Mountain Research Station's Fire Science Laboratory in Missoula, MT, and

came up with a new correction factor. We now recommend enabling the size-correction feature on the DataRam 4, using a correction factor of 0.344.

Smoke Monitoring Web Site Makeover

The Web site for remote smoke particulate monitoring (<http://www.satguard.com/usfs>) is being overhauled to make it easier to use. A new mapping feature and real-time and historical data pages will be incorporated. We hope to complete the new changes to the site by late summer 2003.



Prototype DataRam/Telemetry Instrument Enclosure

MTDC is developing a new enclosure that will house the DataRam and its satellite telemetry system. The aluminum enclosure will keep operating temperatures down (compared to the current red bag enclosure) and will keep all the electronics safe from the elements (wind, rain, dust). Special electronics have been added so that the entire system will operate with line power or a 12-volt deep-cycle battery. The prototype will be completed in early June and tested this summer.

Air Sounding Instrument for Fire Managers

The center hopes to develop an inexpensive instrument to estimate winds in the lowest levels of the atmosphere during wildfires and prescribed burns. Fire and smoke managers need to know the temperature and windspeed of air at these levels. That knowledge can help them when determining whether meteorological conditions are suitable for a prescribed fire, or when predicting the behavior of a wildfire.

A few fire and smoke managers use PIBALS (weather balloons) to estimate winds aloft, but a commercial off-the-shelf temperature sonde and ground tracking station are 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 levels of the atmosphere—the levels that determine how the smoke plume will rise and disperse.



Snowfall Measurement Devices

During the winter of 2002, MTDC operated two prototype snowfall measurement instruments in Missoula and West Yellowstone, MT. The instruments were developed by the Eastern Cereal and Oilseed Research Centre in Ottawa, ON. The instrument uses a rotating ball in a glycol mixture to measure snowfall amounts. Modifications to the instrument and further testing will be conducted during the winter of 2003-2004.

For more information on any of the projects, please contact:

Richard Karsky
MTDC Watershed, Soil, and Air Program Leader
406-329-3921
rkarsky@fs.fed.us

Mary Ann Davies
MTDC Project Leader
406-329-3981
mdavies@fs.fed.us

Wes Throop
MTDC Project Leader
406-329-3957
wthroop@fs.fed.us

Andy Trent
MTDC Project Leader
406-329-3912
atrent@fs.fed.us

[Top](#)



[Print this pub](#)



E-mail: wo_mtdc_webmaster@fs.fed.us

USDA Forest Service - Missoula Technology & Development
Last Modified: undefined

Visitor **000000** since April 6, 2004