FRD ACTIVITIES REPORT
February 2006

Research Programs

Urban Dispersion Program in New York City

A NOAA Technical Memorandum documenting FRD's participation in the MID05 Urban Dispersion Program is in preparation. Our partners in this endeavor were the U.S. Depts. of Homeland Security and Defense. We have completed an internal draft and anticipate having the document ready for ARL review by March 31. The results of this project should make a valuable contribution to our understanding of atmospheric dispersion processes in urban environments and deep street canyons. (Roger Carter 208-526-2745, Debbie Lacroix, Jason Rich)

ET Probe

A paper entitled "In-situ Measurements of 3D Turbulence in Hurricanes Frances and Ivan using a Pressure Sphere Anemometer" was completed for the 27th Conference on Hurricanes and Tropical Meteorology, scheduled for April in Monterey, CA. It has already been uploaded and is available as a pdf file from the official AMS site for the conference (see http://ams.confex.com/ams/pdfpapers/107460.pdf). The paper documents the ET probe deployments during the 2004 hurricane season, and provides some examples of the turbulence data collected. (Richard Eckman, 208-526-2740)

UrbaNet

FRD was requested by ARL to develop a series of tasks, deliverables, and milestones that represent FRD's contribution to the NOAA UrbaNet program. After some consultations with other divisions, four tasks were identified: 1) development of a white paper on the current state of urban dispersion modeling, 2) modification of an existing dispersion model for urban applications, 3) design of a full-scale UrbaNet tracer experiment, and 4) the monitoring of tracers of opportunity in Las Vegas, NV. The last task was inserted because Las Vegas is identified as one of the potential urban test beds for UrbaNet. We are now waiting to learn if our proposal has been accepted by the UrbaNet program manager. (Kirk Clawson, 208-526-2742 and Richard Eckman)

Smart Balloon

Smart balloon communications testing between the balloon and a ground tracking station were completed during February. Satellite telephone communications were markedly improved after a dial-out routine was added to the balloon package. This routine was mandated by General Dynamics (operator of the Iridium satellite system) to insure continuous communications.

Circuit board layout is now complete for the interface board that connects all devices together. Instrument and communications testing continues for implementation before the balloons are deployed in the upcoming TexAQSII air quality study to be held during August and September, 2006 in Houston, TX. (Randy Johnson 208-526-2129 and Shane Beard)

Cooperative Research with DOE NE-ID (Idaho National Laboratory)

Interagency Agreement

An initial meeting was held with DOE personnel in February to discuss the NOAA-DOE interagency agreement (IAG) covering INL activities, which is up for renewal in FY 2007. One of the items discussed was the possibility of developing a Memorandum of Agreement (MOA) between the two agencies in addition to the IAG. The MOA would describe the benefits to each agency of the partnership activities in Idaho Falls, and would help to address some of the misunderstandings that have sometimes arisen at higher levels within each agency. Also under discussion is the need to ensure that the new IAG provides sufficient resources to continue FRD's applied research activities related to dispersion modeling. The recent transformation of priorities at INL has also created several new potential areas of collaboration. (Kirk Clawson, 208-526-2742 and Richard Eckman)

Emergency Operations Center (EOC)

Team D attended a drill at the EOC on 7 February. The scenario for this drill was designed to exercise other components of the EOC staff, so NOAA's role was fairly limited. (Richard Eckman, 208-526-2740 and Debbie Lacroix)

Transport and Dispersion Modeling

The 915 MHz radar wind profiler that is operated as part of the INL Mesonet is approximately 15 years old. We are exploring different options for the maintenance, upgrade, or replacement of the device. As part of this effort, photographs of all the components of the system were acquired and forwarded to Vaisala to determine the specific options that are available for upgrading the system. (Roger Carter 208-526-2745, Tom Strong)

Other Activities

Safety

The DVD "Driving Safety" was shown during the monthly staff meeting. After the meeting, a safety walk-through was performed. (Debbie Lacroix 208-526-9997, Kirk Clawson)

Personnel

Dr. Dennis Finn was selected to fill the vacancy created by the departure 1 year ago of Dr. Thomas Watson. Dr. Finn will begin his duties at FRD in March.