

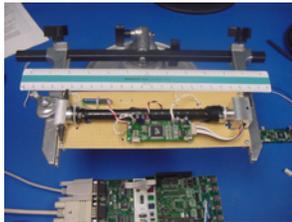


# Targeted WIND Sensing

**New to UNH in July 2003, in support of AIRMAP . . .**



*smart balloon*



*miniature ozone sensor*

The **Targeted Wind, Sensing (TWS)** program at the University of New Hampshire (UNH) is playing a key role in the U.S. involvement in **THORPEX** to provide innovative technologies for global scale measurements of weather and air quality that will enhance current forecasting capabilities.

## **The Challenge . . .**

To improve medium range (2-10 day) numerical forecasts of weather and air quality.

## **Our Mission . . .**

Accurate forecasts of weather and air quality are needed to minimize natural losses to humankind and improve the overall quality of life. A fundamental approach is to obtain extensive coverage of spatial and temporal observations and utilize them effectively in forecasting models. To achieve that, TWS is

- developing low-cost, well-instrumented, autonomous platforms for detailed characterization of physical and chemical properties of the Earth's atmosphere that complement satellite and ground-based observations and,
- demonstrating their use in providing high-quality observations in key data-sparse remote areas (*e.g.*, storm-frequented regions at low-to-mid latitudes) needed for medium-range forecasting.

## **The Execution . . .**

### **Near-Term – FY 03-04:**

Develop miniature ozone and aerosol instrumentation, deploy balloon-based systems during summer 2004, and initiate student and advanced-level projects involving design of platforms and atmospheric sensors.

### **Intermediate-Term – FY 05-06:**

Develop and fly the *Meso-Driftsonde*, an autonomous package that deploys expendable sensors.

### **Longer-Term – FY 06-12:**

Develop advanced innovative platforms and instruments with a suite of capabilities.

## **Educational Commitment . . .**

Undergraduate and graduate students are actively engaged in all aspects of the project.

## **Administration . . .**

The TWS program at UNH will be administered as a component of the NOAA-UNH AIRMAP Cooperative Institute. Professor Talbot is Director of the Institute. A science team will facilitate program coordination and development of scientific objectives and strategy.



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