

## **Strategies for Improved Fire Detection Response Times to Fires in Cargo Compartments**

Jennifer M. Wood and James A. Milke

Department of Fire Protection Engineering, University of Maryland

Timely fire detection in cargo compartments on board transport aircraft is an important safety feature. Concern has been expressed for the response time of current detection technologies installed on aircraft as well as the high frequency of unnecessary alarms. This project will propose to provide a continuation of research on the issues that have been identified relative to fire detection improvements in cargo compartments on aircraft, with a particular emphasis on freighters. Gas sensors and dual wavelength detectors were demonstrated in a previous phase to be responsive to fires in the previous experiment program. Detectors placed inside a ULD responded promptly to the array of fire sources. Hence, a further exploration of these observations is proposed along with testing the nuisance alarm immunity of these detection technologies. One principal goal is to assess the differences in fire detection time for detectors located within ULD versus those located on the ceiling of the cargo compartment for fires which originate in a ULD.