

Block II Chemical Biological Mass Spectrometer



U.S. Army: XM1135 Stryker



USMC: Joint Services Lightweight, HMMWV variant

- **Purpose:** Integrated detector/identifier for chemical and biological warfare agents (CWA and BWA) on the battlefield. System is based upon direct sampling ion trap mass spectrometry, with CI and MS/MS to improve specificity and sensitivity. System is to be deployed in two reconnaissance vehicle platforms.
- **Objective:** Design, fabricate and demonstrate preproduction units of and develop monitoring methods for the Block II Chemical Biological Mass Spectrometer (CBMS II).
 - Ø Must avoid false positive and negative alarms from high levels of interferences.
 - Ø Ruggedness, reliability, producibility, and automation (for ease of use by soldiers) are important.
- **Status:** Liquid CWA capability completed.
 - Ø Low Rate Initial Production units (liquid CWA configuration) now being built by Hamilton Sundstrand Sensor Systems, for two platform programs.
 - Ø BWA, toxic industrial chemicals and materials, and nontraditional agent capabilities being added in 2005/2006.
- **CBMS II Team,** led by ORNL, includes the Colorado School of Mines, MSP Corp., and Hamilton Sundstrand Sensor Systems. Several military labs also collaborating.
- **PIs:** Marc Wise and Kevin Hart, **Manager:** Wayne Griest

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• **Sponsor:** U.S. Army Joint Program
Manager for Nuclear, Biological,
Chemical Contamination Avoidance



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