

# Meteorological Measuring Set–Profiler (MMS-P)

## INVESTMENT COMPONENT

Modernization

Recapitalization

Maintenance

## MISSION

Provides on-demand, real-time meteorological data over an extended battlespace.

## DESCRIPTION

The AN/TMQ-52 Meteorological Measuring Set–Profiler (MMS-P) uses a suite of meteorological sensors, meteorological data from satellites, and an advanced mesoscale atmospheric model to provide highly accurate meteorological data for indirect fire artillery forces. The system uses common hardware, software, and operating systems and is housed in a command post platform shelter and transported on an M1152A High Mobility Multipurpose Wheeled Vehicle (HMMWV).

The mesoscale atmospheric model receives large-scale atmospheric data from the Air Force Weather Agency and other meteorological sensors, and produces a vertical profile of wind speed and direction, temperature, relative humidity, cloud base height, type precipitation, and horizontal visibility in the target area, all of which are necessary for precise

targeting and terminal guidance of various munitions. Profiler transmits this data to indirect fire direction centers for use in developing the firing solution.

This new capability increases the lethality of all field artillery platforms such as the Multiple Launch Rocket System, Paladin, and self-propelled or towed howitzers by increasing the probability of first-round hit, resulting in significant ammunition cost savings for the Army. The current Profiler provides meteorological coverage throughout a 60-kilometer radius, while the follow-on Block III variant extends coverage up to 500 kilometers.

MMS-P replaces the Army's current Meteorological Measuring Set, AN/TMQ-41. For the first time, Army field artillery systems can apply meteorological data along the trajectory from the firing platform to the target area.

## SYSTEM INTERDEPENDENCIES

### Other Major Interdependencies

Navy Operational Global Atmospheric Prediction System, Global Broadcast System

## PROGRAM STATUS

- **1QFY05–Present:** Completed production of the Army Authorization Objective of 108 systems, 96 of which were fielded to Maneuver Brigade Combat Teams, Fire Brigades, and the training base

## PROJECTED ACTIVITIES

- **1QFY11–4QFY17:** Complete fielding of the system to Army units; develop Profiler Block III to reduce the system footprint and leverage technology and software advancements to achieve improvements in accuracy



## ACQUISITION PHASE

Technology Development

Engineering & Manufacturing Development

Production & Deployment

Operations & Support

## Meteorological Measuring Set-Profiler (MMS-P)

### FOREIGN MILITARY SALES

None

### CONTRACTORS

Smiths Detection, Inc. (Edgewood, MD)  
Pennsylvania State University  
(University Park, PA)

