

# **DISCOVER-AQ Baltimore-Washington Field Mission Forecasting for Flight Planning**

- **Team:** Ken Pickering, Melanie Follette-Cook, Bryan Duncan, UMD grad student, PSU grad student
- **Sources of forecast guidance:**
  - Meteorology:** NCEP North American Mesoscale Model (NAM)  
UMD AOSC WRF  
NWS Sterling VA weather discussions  
Sterling, VA, Wakefield VA, xxxx MD radars  
Lidar- and wind profiler-based boundary layer depths
  - Air Quality:** MDE ozone and PM forecasts and discussions for next day and outlook for Days 2 and 3 – issued by 3 PM and placed on [www.airnow.gov](http://www.airnow.gov) web site
  - NOAA operational CMAQ ozone forecast guidance - model is run twice a day (00 and 12 UT) out to 48 hours

## **Possible Conditions to Try to Fly:**

- **A variety of ozone and PM conditions (moderate to severe pollution)**
- **A wide variety of cloud conditions ranging from clear to 50% partial cloudiness (fair weather Cu OK; avoid stratus decks)**
- **Light (near stagnation) to moderate wind speed conditions**
- **A mix of local pollution and transport from upwind source regions (elevated pollution reservoir)**
- **Before and after a thunderstorm passage**
- **Bay breeze conditions**
- **Sunrise (chemical evolution, low-level jet, subsequent BL growth)**