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

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• 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 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)