
# PM2.5 System

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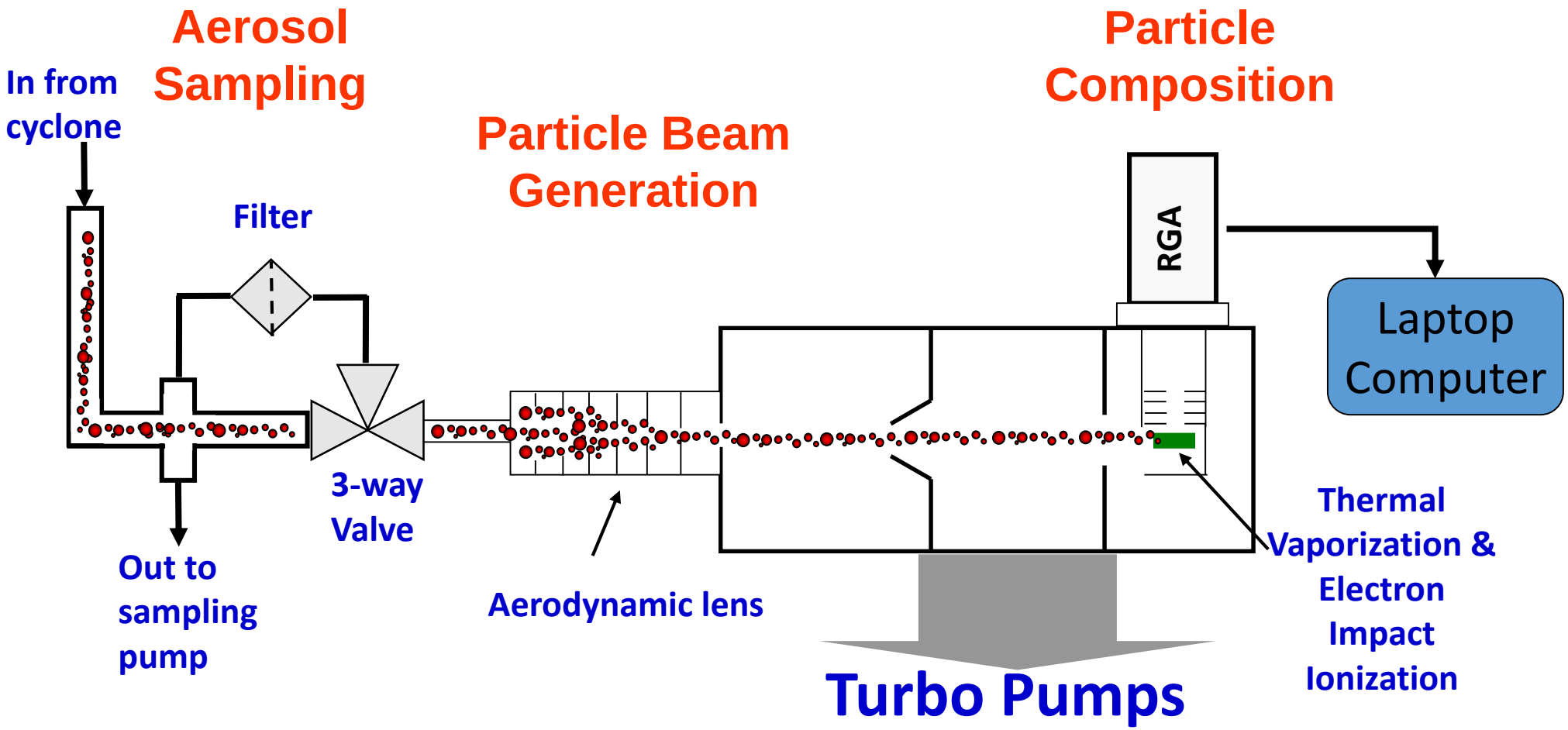
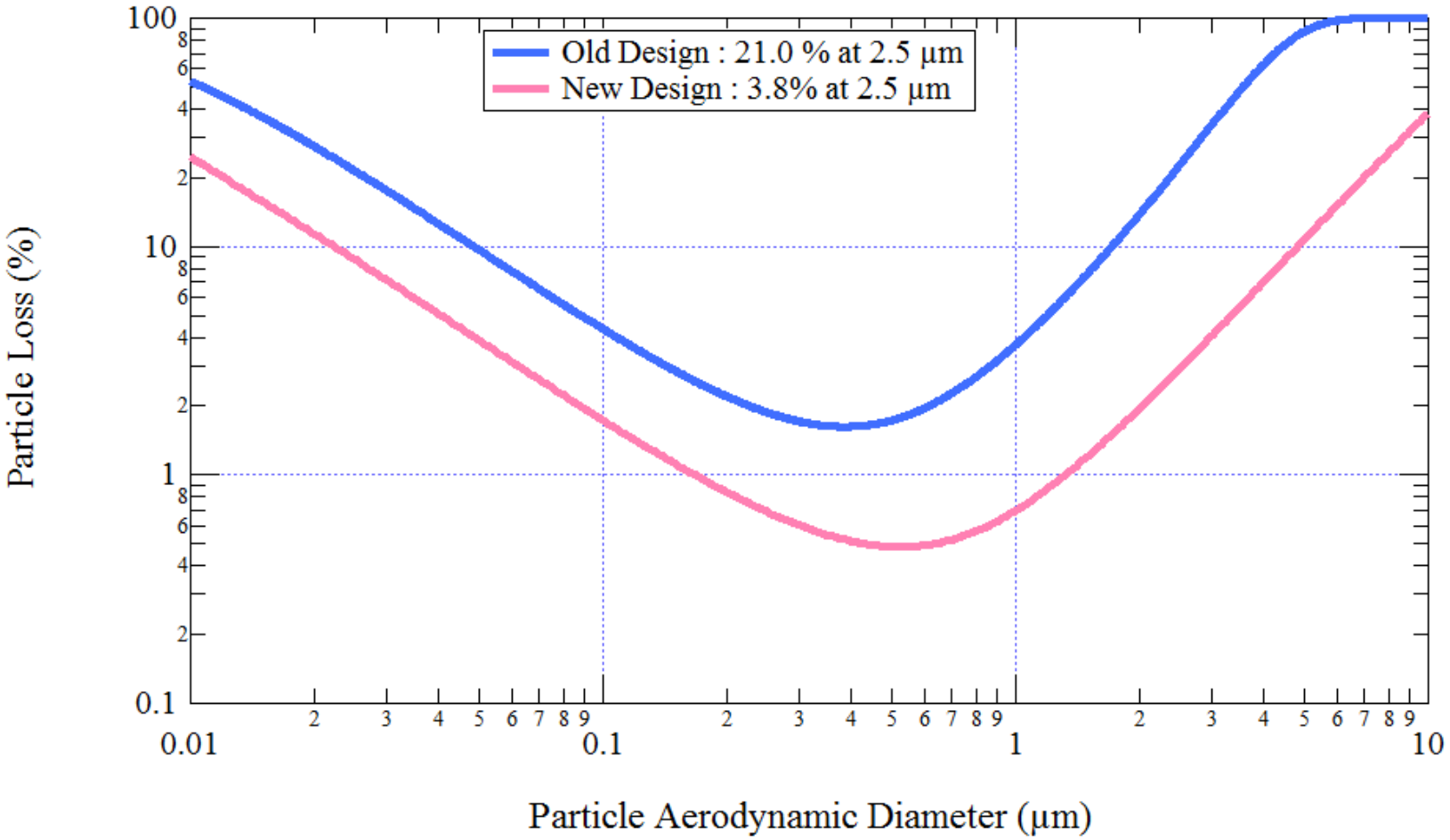
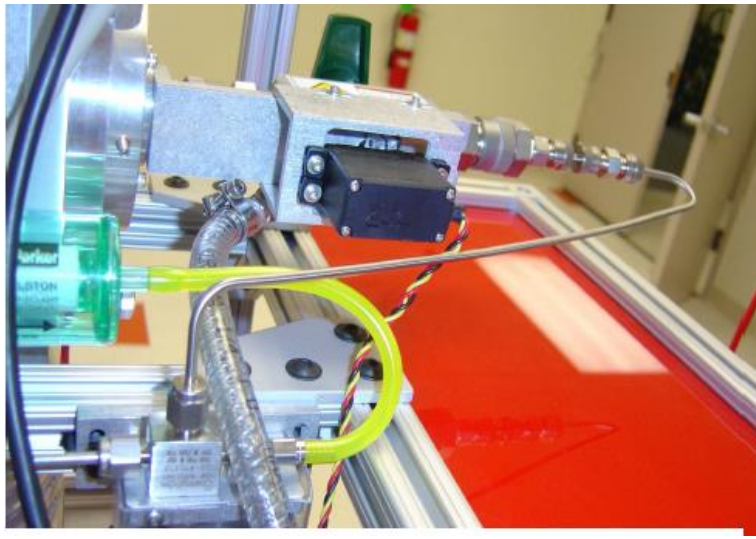
# Aerosol Chemical Speciation Monitor (ACSM)




Ng, et al., Aerosol Sci. Technol., 45:7, 770-784, 2011

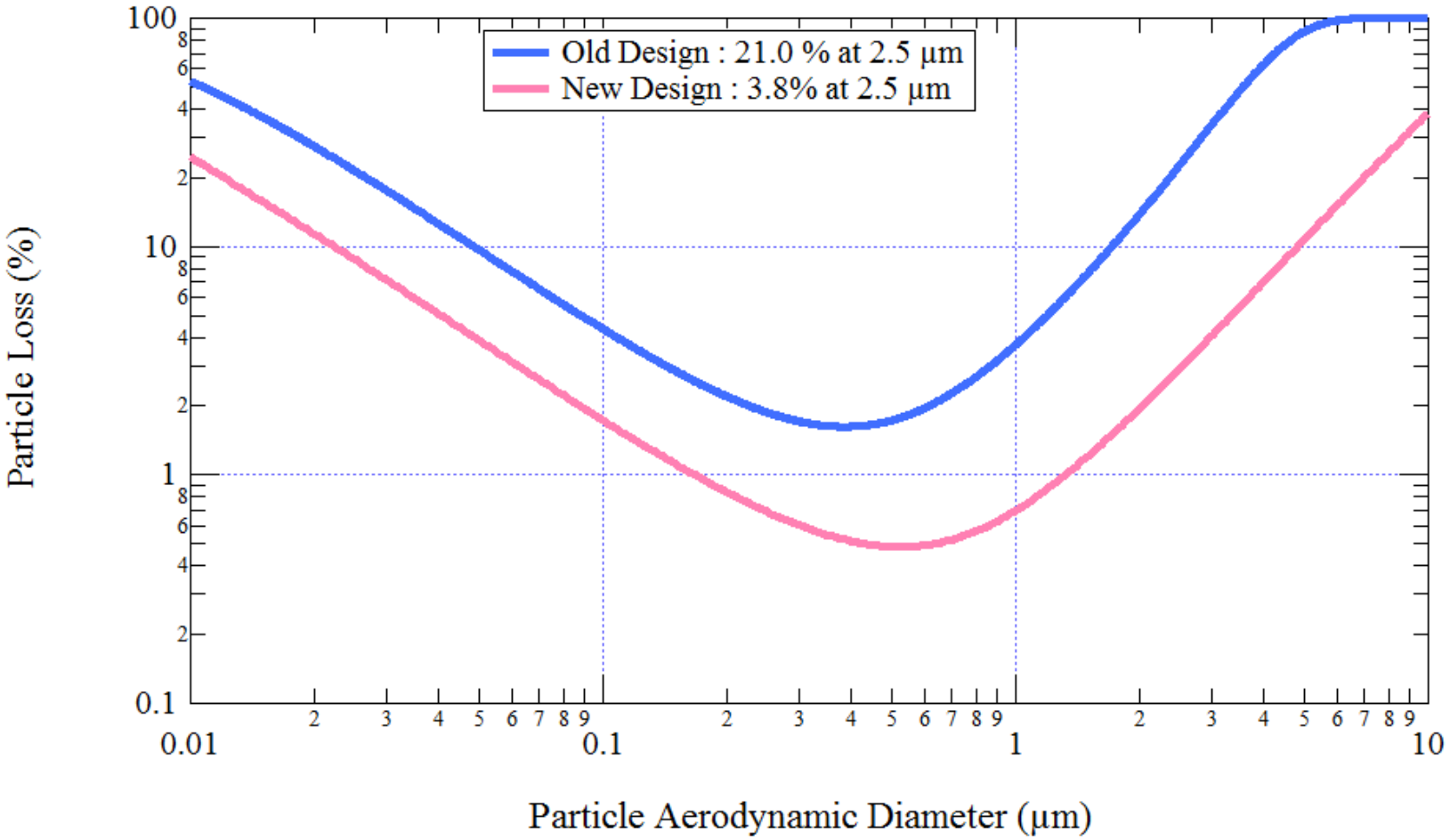
# Aerosol Sampling – Reduce Inlet Losses



Von der Weiden et al., Atmos. Meas. Tech., 2, 479-494, 2009.

# Aerosol Sampling – Reduce Inlet Losses

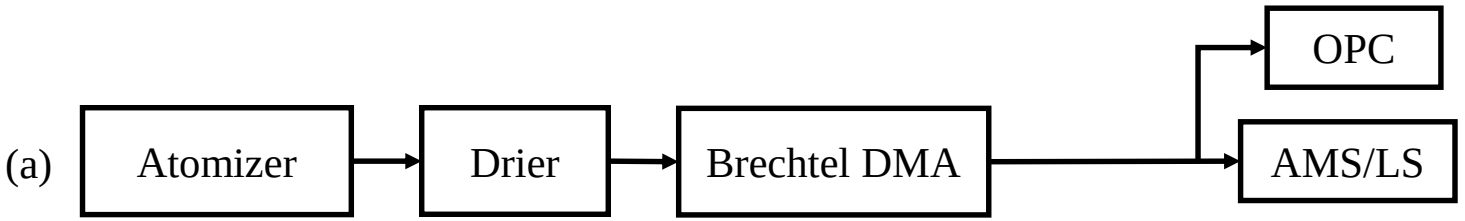



Von der Weiden et al., Atmos. Meas. Tech., 2, 479-494, 2009.

Straight path 3-way valve

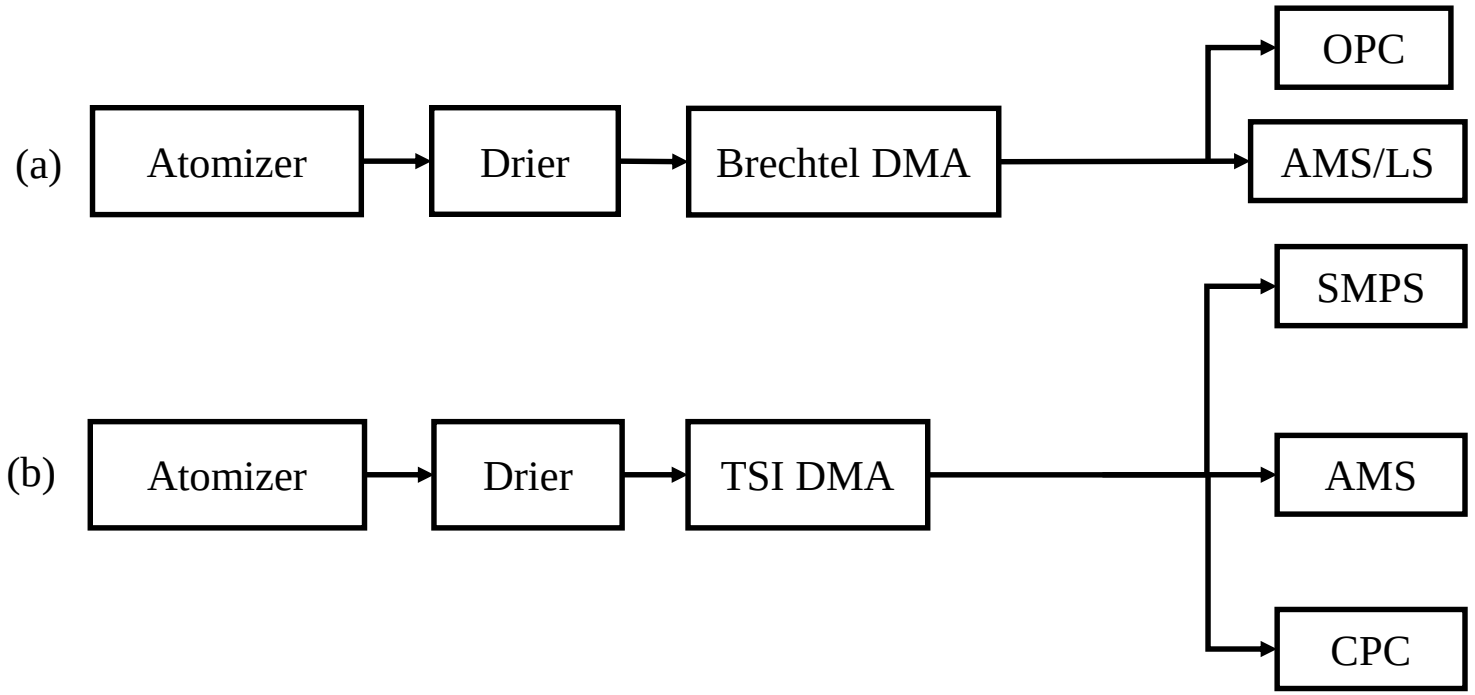
No bends in 1/8” tube

# Particle Beam Generation – How to measure losses




**Large Particles**

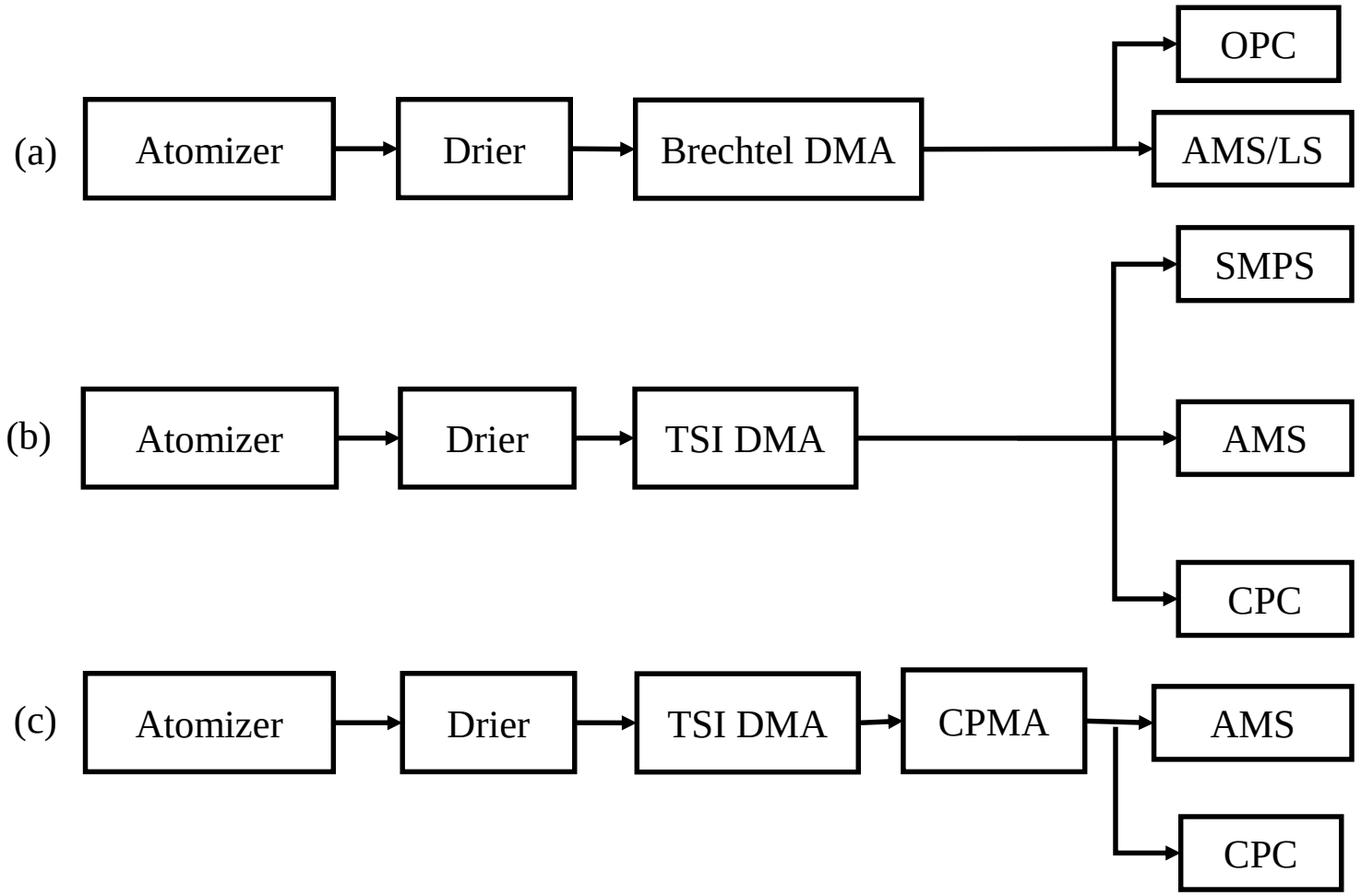
# Particle Beam Generation – How to measure losses




**Large Particles**

**Small Particles (ok)**

# Particle Beam Generation – How to measure losses

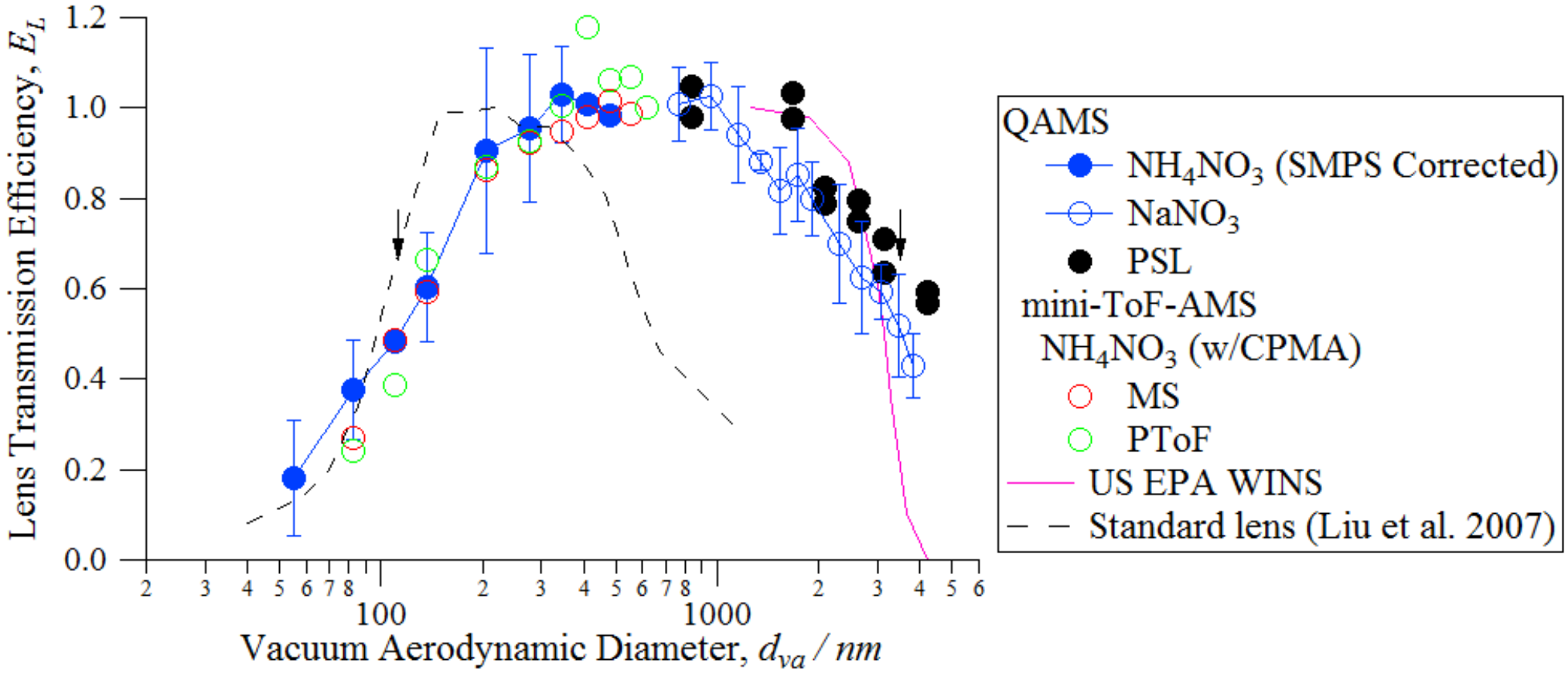



**Large Particles**

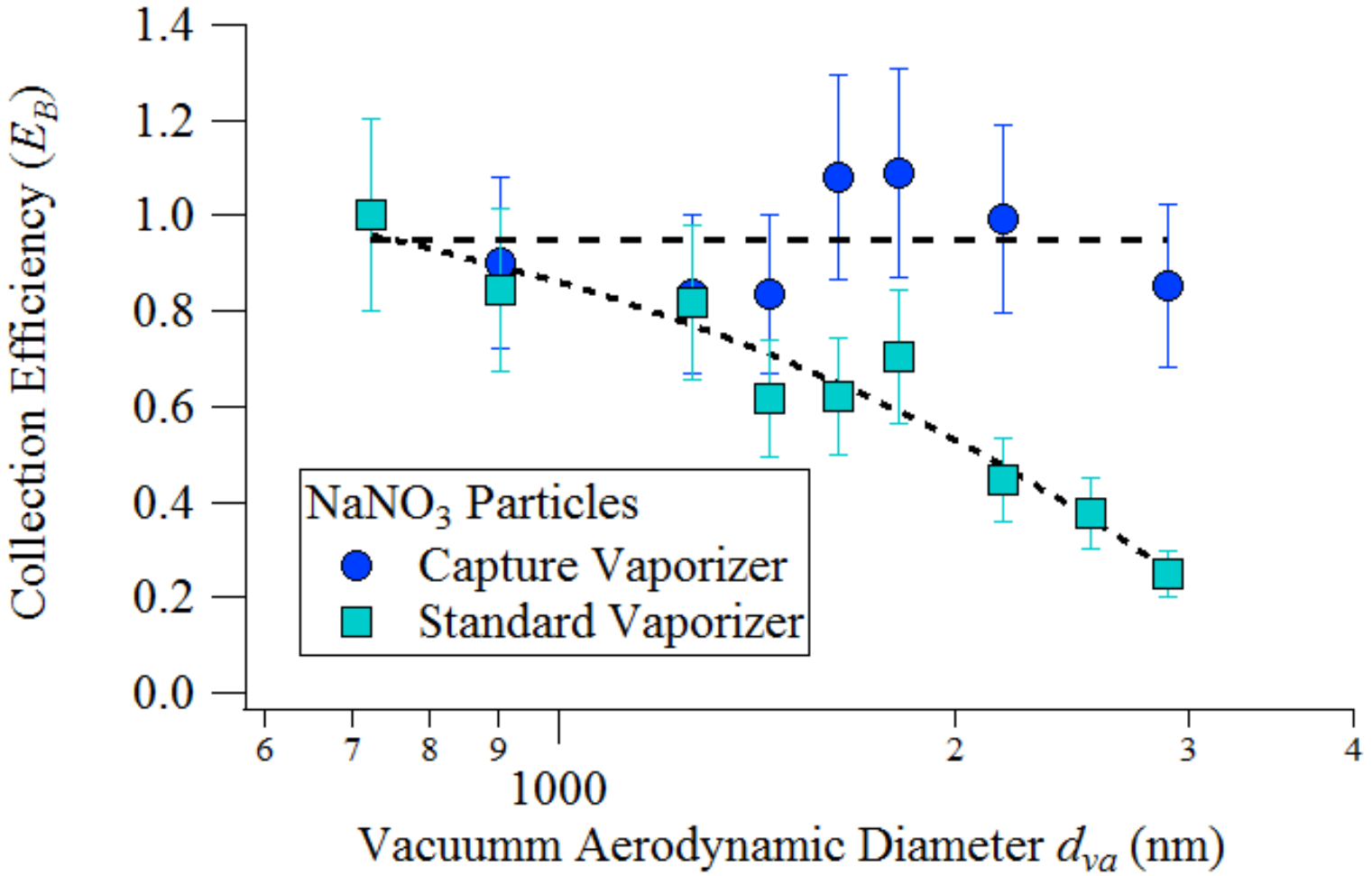
**Small Particles (ok)**

**Small Particles (better)**

# Particle Beam Generation – Measured Losses

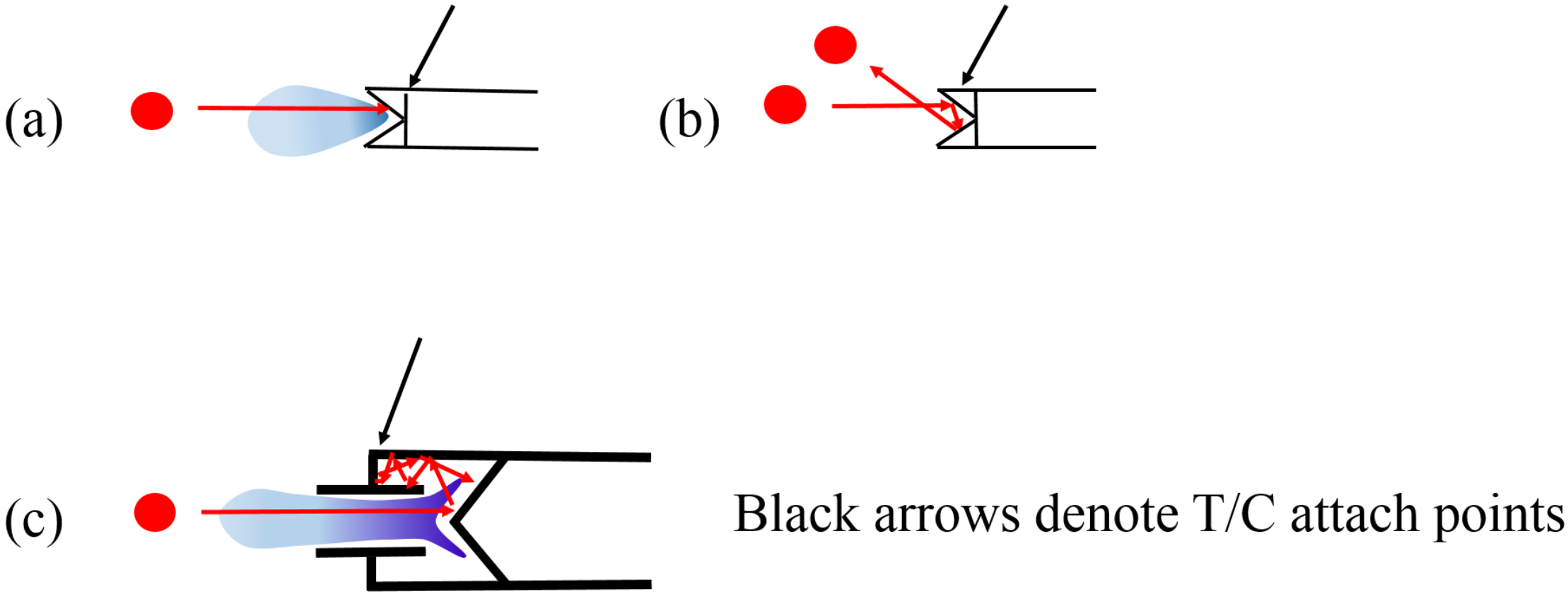


# Particle Composition - Bounce



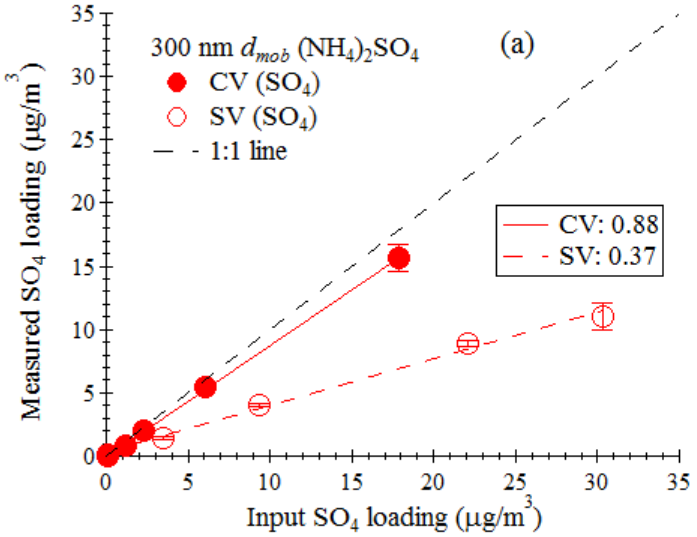

This is why we need to solve bounce to have a working PM2.5 system

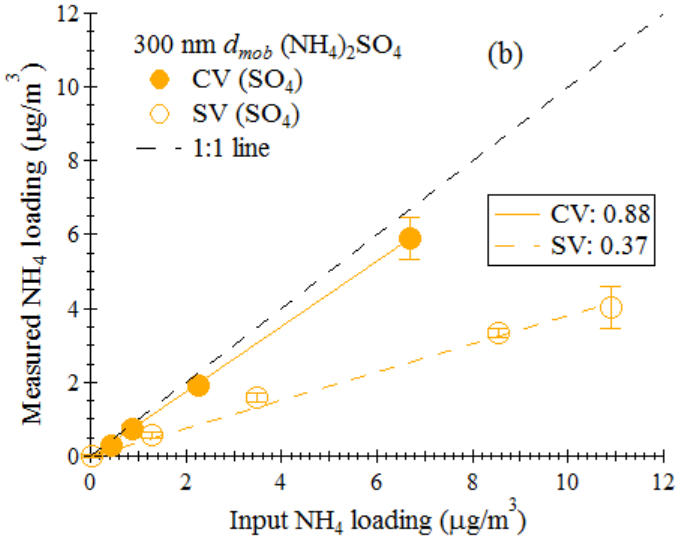
# Particle Composition – Fixing Bounce

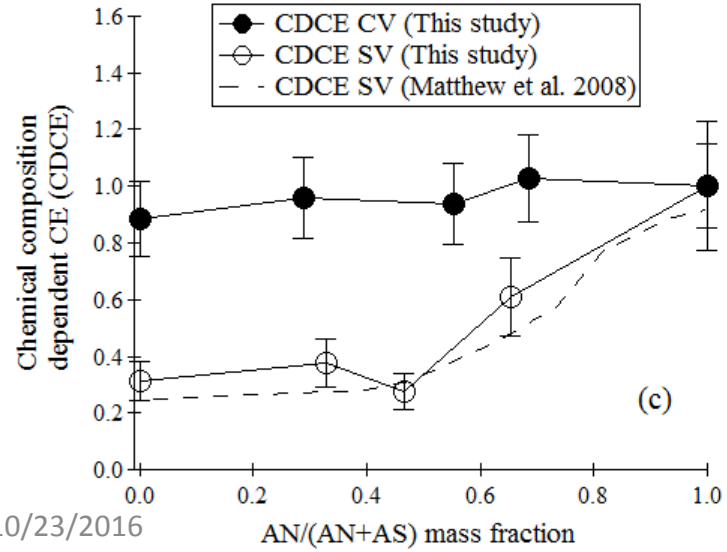



Black arrows denote T/C attach points

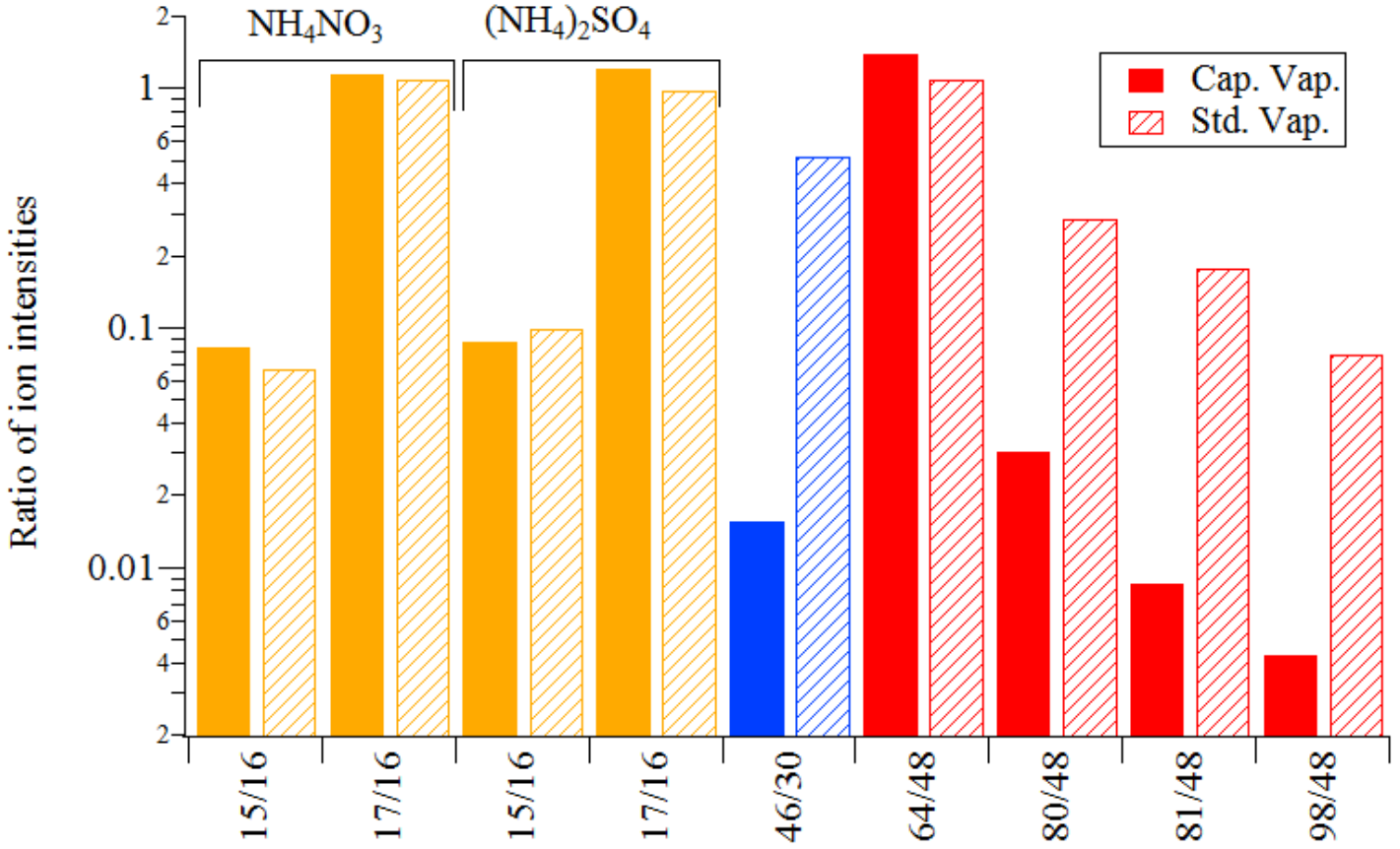
# Particle Composition – Bounce is fixed



# Particle Composition – Fragmentation Comparison



# Particle Composition –Optimum Vaporizer Temperature