Increased volatility in cloud residuals compared to ambient aerosols

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We see
INCREASING VOLATILITY DURING STRATIFORM CLOUD EVENT
• Decreased volatility with increased particle diameter
• Increased volatility for larger cloud residuals
• General lower hygroscopicity for smaller particles
  1.2 < GF < 1.5
  0.08 < κappa < 0.26

Chemical composition

Volatility vs Hygroscopicity

CAEsAR Campaign, summer 2014
Aerosol physical and chemical properties was measured at Mt Åreskutan, Central Sweden.
A Volatility and Hygroscopicity Tandem Differential Mobility Analyser (V/H-TDMA) was connected to a Counterflow Virtual Impactor (CVI) inlet, separating ambient aerosols and cloud droplet residuals.

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