comparing satellite to other datasets

lessons learned in Aerosol_cci

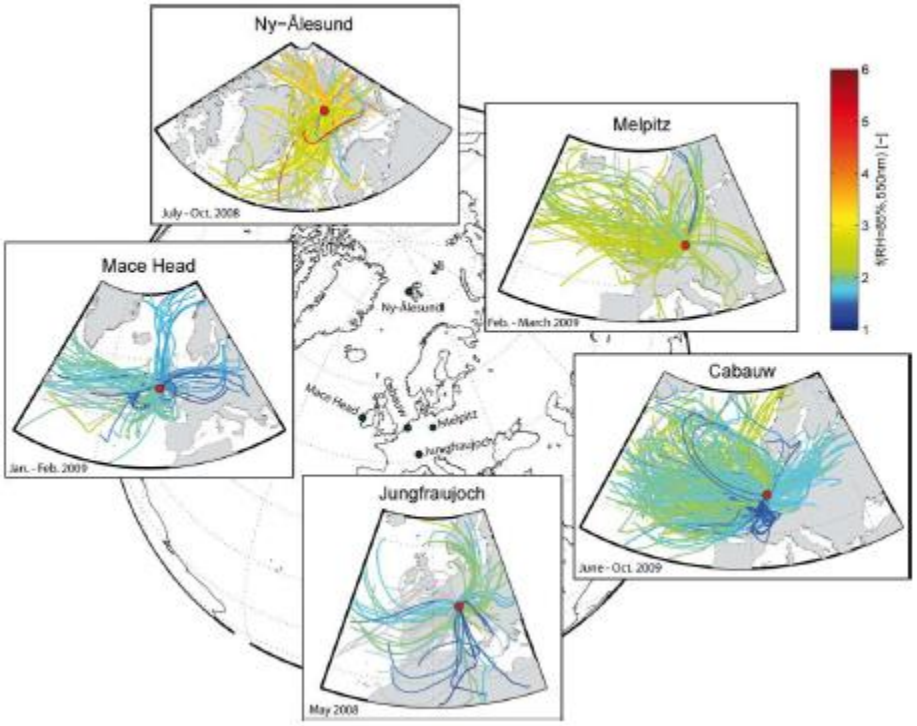
Can we use in situ data for satellite validation?

- Why?
  - AERONET inversions have assumptions
  - In situ can tie to SI standards / understand biases
  - Joint view can help understand statistics / relevance of biases

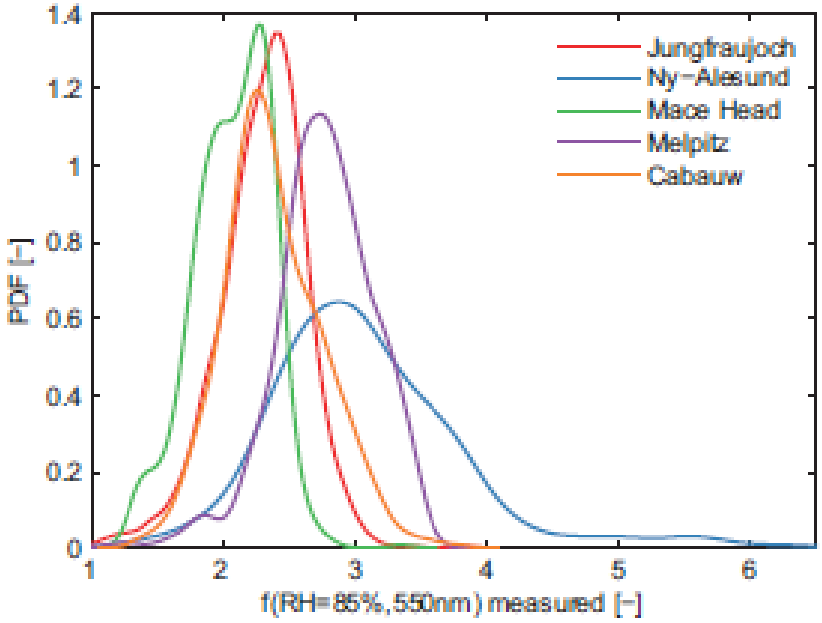
- Why is it difficult?
  - Problems of closure: vertical, hygroscopicity

- Suggested approaches (M. Fiebig)
  - extensive campaigns
    - Which parameters? Representativity?
  - High-resolution chemical transport model
    - Which requirements? Correlation lengths?

Issues for use of in situ data

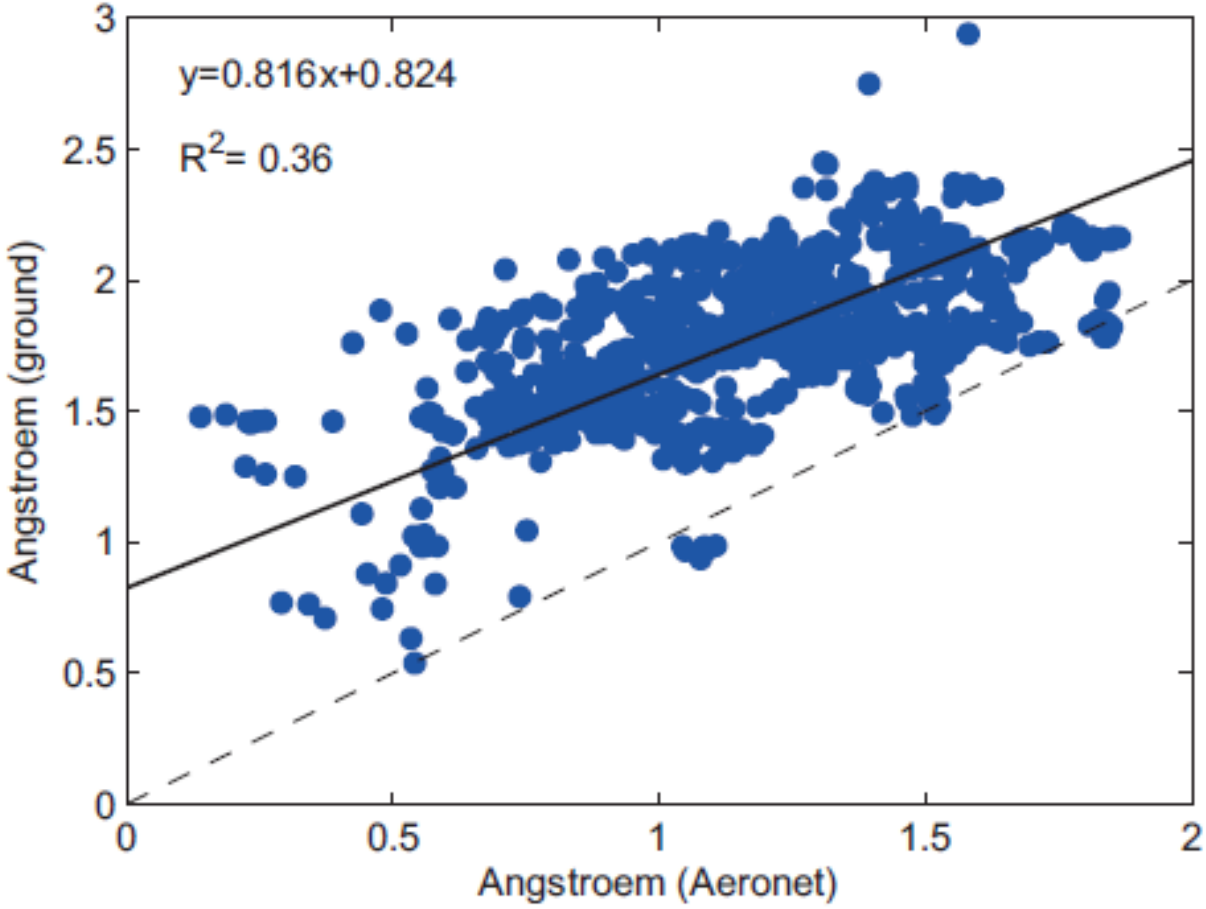


72hr trajectories; colours f(85%)

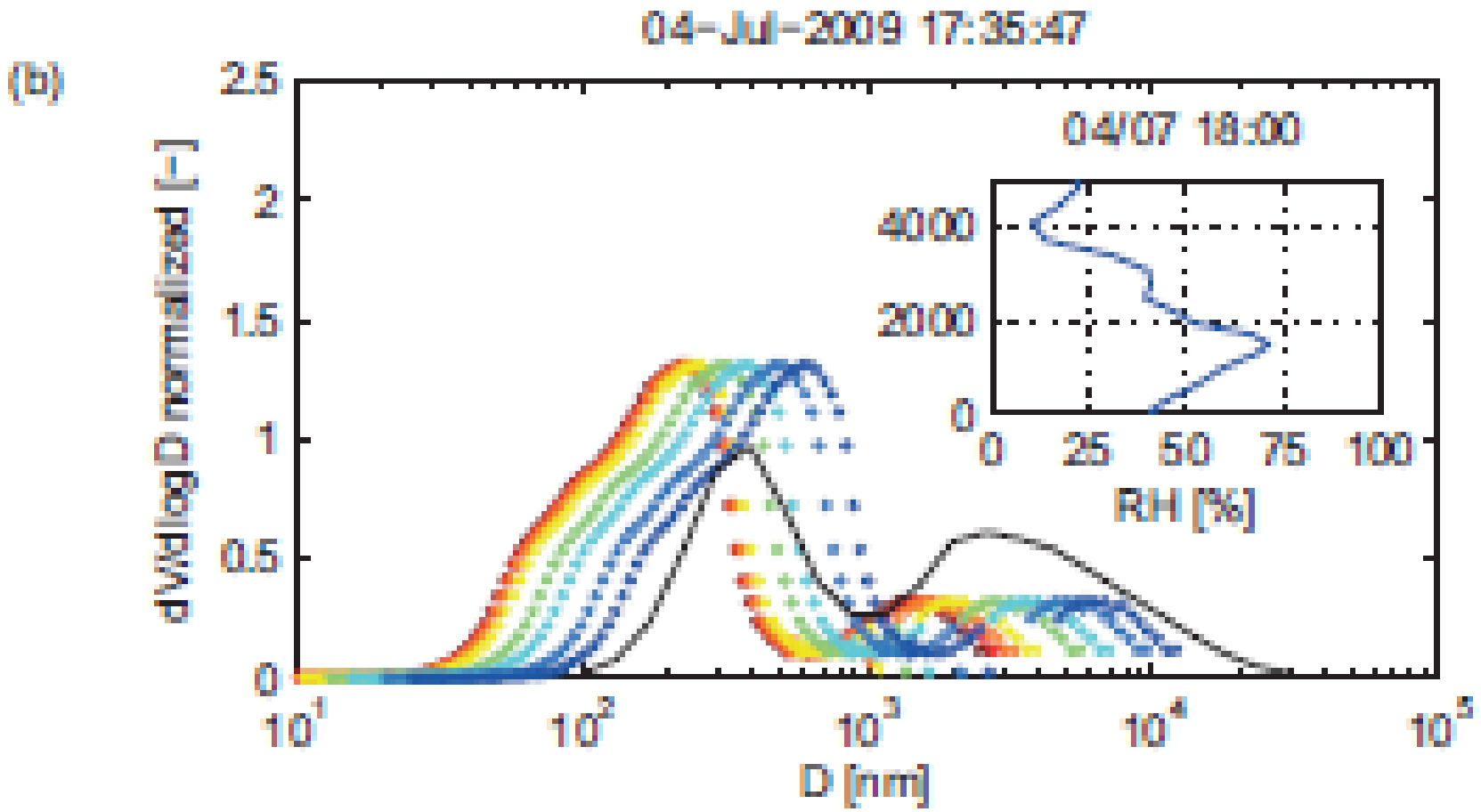


Pdfs of f(85%) for 5 stations
-> 40% uncertainty

Issues for use of in situ data



Issues for use of in situ data



AERONET (black) vs in situ for different RH