

Interactive comment on “High humidity tandem differential mobility analyzer for accurate determination of aerosol hygroscopic growth, microstructure and activity coefficients over a wide range of relative humidity” by Eugene F. Mikhailov and Sergey S. Vlasenko

Anonymous Referee #2

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Mikhailov et al. present an instrument characterization of a newly constructed high humidity tandem DMA instrument. The instrument shows improved capabilities compared to previously described setups. The manuscript is well written and I recommend it for publication in AMT.

Minor comments

The authors might consider adding a section comparing the versatility and accuracy of

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the system with other techniques. Specifically the Leipzig based LACIS instrument and the filter-based mass-based hygroscopicity method used by the same author previously would be interesting to compare in this context.

The authors state that activity coefficients can be determined from the data without the need to assume volume additivity by relying only on known (bulk) solution density. The authors should add that solution density is rarely known for metastable solutions and systems of interest to be studied with the HHTDMA.

The data should be made available in a FAIR aligned repository. Making data "available upon request to the author" is inconsistent with the AMT data policy (https://www.atmospheric-measurement-techniques.net/about/data_policy.html).

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