lasFE: Lognormal Fitting of Laser Aerosol Spectrometer data for Filtration Efficiency Analysis

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`lasFE` facilitates the analysis of particle-size distribution (PSD) data collected using a TSI model 3340A Aerosol Spectrometer (LAS) to determine number-collection filtration efficiency (FE). The software is designed to iterativly fit aerosol particle-size data collected upstream and downstream of a filter to a lognormal distribution to characterize aerosol properties. While this code was written for purposes of `PH 6433 (Computational Physics)`, software development continues for nuclear-grade HEPA filter qualification and performance evaluation. This early preview of `lasFE` features data importation and preprocessing, nonlinear fitting, numerical integration, error analysis, and plotting functionalities. Ongoing development and issues are discussed. hello world

INTRODUCTION

SOFTWARE QUALITY ASSURANCE

STATISTICAL METHODS

RESULTS

DISCUSSION

CONCLUSION

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