

PP10 CALIBRATION OF A LOW COST PARTICLE SENSOR

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In this work, we developed and calibrated a low cost particle sensor which provides comparable measurements with the aerodynamic particle sizer (APS 3321). First, the performance of eight randomly selected laser light scattering particle sensors were tested against the APS using road dust and sodium chloride particles in a laboratory chamber. Results show sensor repeatability and strong positive correlations with APS, but typically particle concentration underestimations and high dependence on particle source. The linear parametric models developed in the sensor evaluation were also validated by comparison with non-parametric regression models.