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# Aerosol dry deposition in the urban environment: assessment of deposition velocity on building facades

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## Abstract

Deposition velocities of aerosol on building and monument vertical surfaces have scarcely been documented and modeled so far. A methodology is proposed based on simultaneous measurements of artificial aerosol tracer fluorescein emissions, concentrations and depositions, and of high frequency turbulent variables. The results are compared to year-long deposition of <sup>7</sup>Be, a naturally produced airborne radioactive particle tracer. A three-dimensional simulation of the turbulent flow and concentration fields in the vicinity of the wall specifies the flow structure responsible for deposition on the facade. It also allows comparison of the measured fluorescein deposition velocities with two semi-empirical models.

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