Recent advances in droplet modelling using the Full Lagrangian Approach

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Abstract
Sprays are wide-spread in daily life, examples include aerosols generated when coughing, sprays used for cooling or surface coating. The Full Lagrangian Approach (FLA) is known for its advantages in application to particle-laden flows. This approach makes it possible to capture detailed structures in the particulate clouds, including where particle trajectories cross and particles collect in narrow regions. It has proven to be an efficient approach for dilute mixtures and recently it was applied to polydisperse evaporating sprays. In this presentation, we will present the recent development of the FLA, including a generalised FLA and experimental work designed for the FLA validation.