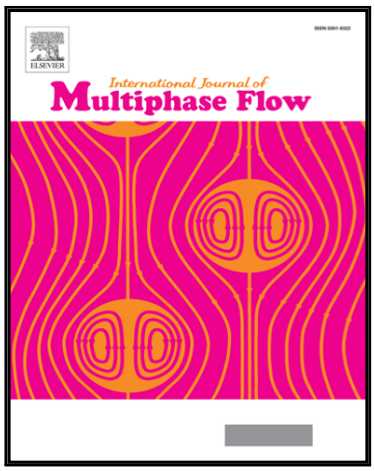

Multiscale simulations and experiments on water jet atomization

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PII: S0301-9322(16)30745-5
DOI: 10.1016/j.ijmultiphaseflow.2017.05.006
Reference: IJMF 2596

To appear in: *International Journal of Multiphase Flow*

Received date: 12 December 2016
Revised date: 28 March 2017
Accepted date: 19 May 2017

Please cite this article as: Mahdi Saeedipour, Simon Schneiderbauer, Gregor Plohl, Günter Brenn, Stefan Pirker, Multiscale simulations and experiments on water jet atomization, *International Journal of Multiphase Flow* (2017), doi: 10.1016/j.ijmultiphaseflow.2017.05.006

Highlights

- We present a RANS-based multiscale model for simulation of primary atomization.
- Phase-Doppler anemometry (PDA) experiments were done to characterize water sprays.
- The model is validated against experimental data using a point-by-point comparison.
- The model predicts the size and velocity distributions of droplets reasonably.
- The model requires relatively low computational effort for modeling high-Re sprays.