# **Accepted Manuscript**

Predicting droplet deformation and breakup for moderate Weber numbers

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PII: \$0301-9322(15)30213-5

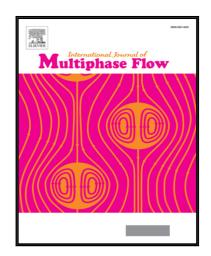
DOI: 10.1016/j.ijmultiphaseflow.2016.06.001

Reference: IJMF 2407

To appear in: International Journal of Multiphase Flow

Received date: 19 December 2015

Revised date: 1 June 2016 Accepted date: 1 June 2016



Please cite this article as: George Strotos, Ilias Malgarinos, Nikos Nikolopoulos, Manolis Gavaises, Predicting droplet deformation and breakup for moderate Weber numbers, *International Journal of Multiphase Flow* (2016), doi: 10.1016/j.ijmultiphaseflow.2016.06.001

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#### ACCEPTED MANUSCRIPT

## **Highlights**

- CFD simulation of bi-axial droplet motion in continuous air jet experiment
- Comparison against detailed experimental data for droplet breakup
- Capturing of droplet breakup regimes for a wide range of Weber numbers
- Effect of numerical parameters in predicting droplet breakup
- The gas phase recirculation affects the breakup outcome
- The pressure interpolation scheme affects the predicted flow field

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