

## Accepted Manuscript

Predicting droplet deformation and breakup for moderate Weber numbers

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PII: S0301-9322(15)30213-5  
DOI: [10.1016/j.ijmultiphaseflow.2016.06.001](https://doi.org/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](https://doi.org/10.1016/j.ijmultiphaseflow.2016.06.001)

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**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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