

## Accepted Manuscript

A bounded upwind-downwind semi-discrete scheme for finite volume methods for phase-separation problems

Axel E. Larreteguy, Luis F. Barcelo, Pablo A. Caron

PII: S0307-904X(17)30320-7  
DOI: [10.1016/j.apm.2017.05.003](https://doi.org/10.1016/j.apm.2017.05.003)  
Reference: APM 11755



To appear in: *Applied Mathematical Modelling*

Received date: 22 June 2016  
Revised date: 27 March 2017  
Accepted date: 2 May 2017

Please cite this article as: Axel E. Larreteguy, Luis F. Barcelo, Pablo A. Caron, A bounded upwind-downwind semi-discrete scheme for finite volume methods for phase-separation problems, *Applied Mathematical Modelling* (2017), doi: [10.1016/j.apm.2017.05.003](https://doi.org/10.1016/j.apm.2017.05.003)

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

**Highlights**

- We present a semi-discrete scheme for solving phase separation problems.
- We focus on the disperse phase transport equation of a finite volume drift-flux model.
- The semi-discrete scheme is mathematically proven to ensure boundedness of solutions.
- Is simpler than existing successful but more elaborate approaches, although not that accurate.
- The scheme is tested in both academic separation problems and industrial applications.

Download English Version:

<https://daneshyari.com/en/article/5470679>

Download Persian Version:

<https://daneshyari.com/article/5470679>

[Daneshyari.com](https://daneshyari.com)