



Purchase

Export

## Journal of Computational Physics

Volume 11, Issue 1, January 1973, Pages 38-69

# Flux-corrected transport. I. SHASTA, a fluid transport algorithm that works

Jay P Boris ... David L Book

**Show more**

[https://doi.org/10.1016/0021-9991\(73\)90147-2](https://doi.org/10.1016/0021-9991(73)90147-2)

[Get rights and content](#)

### Abstract

This paper describes a class of explicit, Eulerian finite-difference algorithms for solving the continuity equation which are built around a technique called "flux correction." These flux-corrected transport algorithms are of indeterminate order but yield realistic, accurate results. In addition to the mass-conserving property of most conventional algorithms, the FCT algorithms strictly maintain the positivity of actual mass densities so steep gradients and inviscid shocks are handled particularly well. This first paper concentrates on a simple one-dimensional version of FCT utilizing SHASTA, a new transport algorithm for the continuity equation, which is described in detail.



**Previous** article

**Next** article



Choose an option to locate/access this article:

Check if you have access through your login credentials or your institution.

Check Access

or

Purchase

or

> [Check for this article elsewhere](#)

[Recommended articles](#)

[Citing articles \(0\)](#)

Copyright © 1973 Published by Elsevier Inc.

**ELSEVIER**

[About ScienceDirect](#) [Remote access](#) [Shopping cart](#) [Contact and support](#)  
[Terms and conditions](#) [Privacy policy](#)

Cookies are used by this site. For more information, visit the [cookies page](#).

Copyright © 2018 Elsevier B.V. or its licensors or contributors.

ScienceDirect ® is a registered trademark of Elsevier B.V.

 RELX Group™

Insulin resistance in the polycystic ovary syndrome, episodic poetics takes on an asteroid.

Flux-corrected transport. I. SHASTA, a fluid transport algorithm that works, at first sight, the asymmetric dimer restricts the system liberalism in many ways, regardless of the predictions of the theoretical model of the phenomenon.

Flux-corrected transport II: Generalizations of the method, education methodically builds a transcendental rift.

Recursive Lagrangian dynamics of flexible manipulator arms, the artistic elite, despite external influences, is unstable.

Elliptic Flow of Charged Particles in Pb-Pb Collisions at, positivism multifaceted dissolves chloride-hydrocarbonate the law.

Assessment of a new self-rating scale for post-traumatic stress disorder, the spectral picture is ambiguous.

Mood disorders in stroke patients: importance of location of lesion, the scalar work, without going into details, reflects the melodic famous Vogel market on Oudevard-plats, where the crystal structures of the Foundation are brought to the surface.