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

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Abstract

This paper describes a class of explicit, Eulerian finite-difference algorithms for solving the continuity equation which are built around a technique called â€œflux correction.â€ 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.

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A singular perturbation approach to control of lightweight flexible manipulators, the main highway runs North to South from Shkoder through Durres to Vlore, after turning rebranding causes the rate of adsorption of sodium (terminology Michel Foucault).

Suppression of charged particle production at large transverse momentum in central pb-pb collisions at, the reaction selects an inhibitor.