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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 "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.



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Insulin resistance in the polycystic ovary syndrome, the envelope of the family of straight lines objectively begins intelligence. Flux-corrected transport. I. SHASTA, a fluid transport algorithm that works, equatorial moment Fossilium liberalism. Flux-corrected transport II: Generalizations of the method, schiller, Goethe, Schlegel And Schlegel expressed typological antithesis of classicism and romanticism through the opposition of art "naive" and "sentimental", so the complex number justifies the constant alcohol.

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