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Michael Sever* (sever@math.huji.ac.il), Department of Mathematics, The Hebrew University, Givat Ram, Jerusalem, Israel. *Linear stability of weak solutions of multidimensional systems of conservation laws.*

Linear stability of discontinuous, weak solutions of multidimensional systems of conservation laws, with respect to perturbation of initial-boundary data, is exceptional. We prove stability for a nontrivial class of self-similar weak solutions of the symmetric p-system in two dimensions. The decisive step is judicious choice of the test space used in the weak form of the linearized system, made possible by exceptional structure of this system. We obtain definitions of stability and admissibility applicable generally, and suitable for computational investigation. (Received October 27, 2014)