1019-35-56   **Jeffrey Humpherys*** (`jeffh@math.byu.edu`), Department of Mathematics, Provo, UT 84602, and **Kevin Zumbrun** (`kzumbrun@indiana.edu`), Department of Mathematics, Rawles Hall, Bloomington, IN 47401. *Evans Function Computation for Large Systems.*

We describe our new approach to Evans function computation for large systems, which avoids the spatial and temporal blow up of exterior-product methods. We introduce a polar-coordinate shooting method, for which the angular equation is a variation of continuous orthogonalization and the radial equation is easily computable and restores analyticity. We then use this new method to explore the shock wave stability problem for large one-dimensional viscous and viscous-dispersive conservation laws. (Received August 03, 2006)