## 1052-91-50 Harold M Hastings\* (Harold.Hastings@Hofstra.edu), Dept. of Physics and Astronomy, Berliner 102, 151 Hofstra University, Hempstead, NY 11549-1510, and Michael Bantegui, Michael Palmer and Thomas Savino. Stability and complexity of model economic systems: a random matrix approach.

We explore the stability of the world trade network using a data-driven random matrix model. Despite their complexity, world trade dynamics are dominated by a small core of countries and links. Thus large fluctuations, perhaps outside of the basin of attraction for a "stable" growth trajectory, are much more likely than extrapolation based upon "typical" fluctuations would predict. Partially supported by the Department of Energy Award DE-FG02-08ER64623. This report was prepared as an account of work sponsored by an agency of the US Government. Neither the US Government nor any agency thereof, nor any of their employees, makes any warranty, express or implied, or assumes any legal liability or responsibility for the accuracy, completeness, or usefulness of any information, apparatus, product, or process disclosed, or represents that its use would not infringe privately owned rights. Reference herein to any specific commercial product, process, or service by trade name, trademark, manufacturer, or otherwise does not necessarily constitute or imply its endorsement, recommendation, or favoring by the US Government or any agency thereof. The views and opinions of authors expressed herein do not necessarily state or reflect those of the US Government or any agency thereof. (Received August 11, 2009)