Public Lecture

Mathematics Awareness Month

John Hubbard, Cornell University

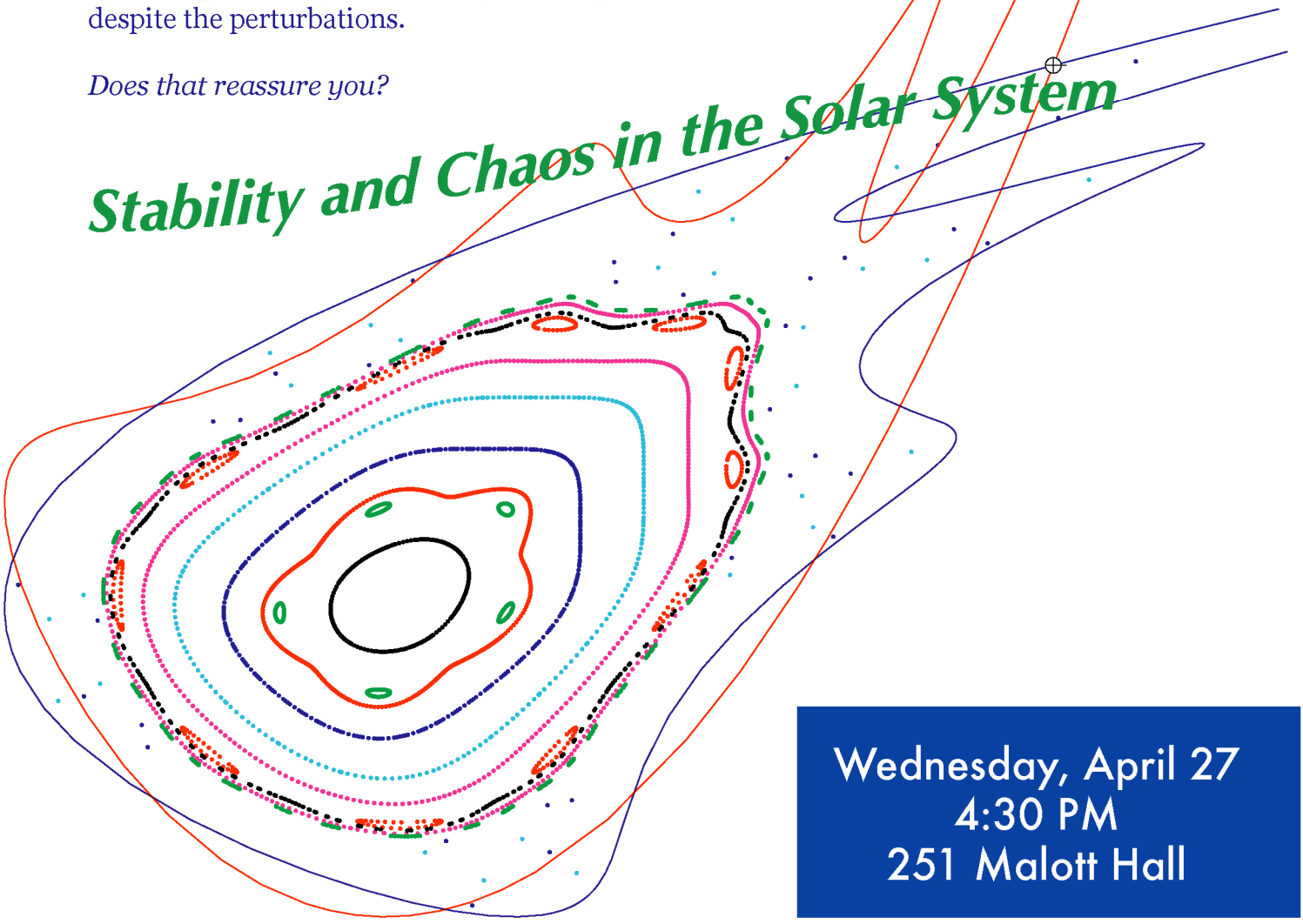
If the planets obeyed Kepler's laws *exactly*, the solar system would go on forever, more as less as we see it. But Jupiter perturbs Saturn's orbit (as well as all the others), and these perturbations could build up over time.

Newton thought that God needed to reset the clock every several centuries before the perturbations got out of hand.

The puzzle of how the solar system can be as stable as it is was not "solved" until Kolmororov showed in 1954 that with "positive probability" the solar system might be stable despite the perturbations.

Does that reassure you?

Stability and Chaos in the Solar System



Wednesday, April 27
4:30 PM
251 Malott Hall