

**Meeting:** 1007, Santa Barbara, California, SS 1A, Special Session on Dynamical Systems in Neuroscience

1007-37-22      **Andrey Shilnikov\*** ([ashilnikov@gsu.edu](mailto:ashilnikov@gsu.edu)), Dept Mathematics and Statistics, 30 Pryor Street, Atlanta, GA 30303, and **Gennady Cymbalyuk** ([gcym@phy-astr.gsu.edu](mailto:gcym@phy-astr.gsu.edu)), Department of Physics and Astronomy, 29 Peachtree Center Avenue, Atlanta, GA 30303. *Canard torus bifurcation in a two time scale neuron model.*

We study a canard torus bifurcation a leech neuron model with two time scales. Its feature is the fast subsystem has a saddle-node limit cycle bifurcation that makes the torus bifurcation possible in the phase space of the whole system. The live time of the canard torus is short as it breaks down thereby creating the onset of narrow chaos. (Received December 01, 2004)