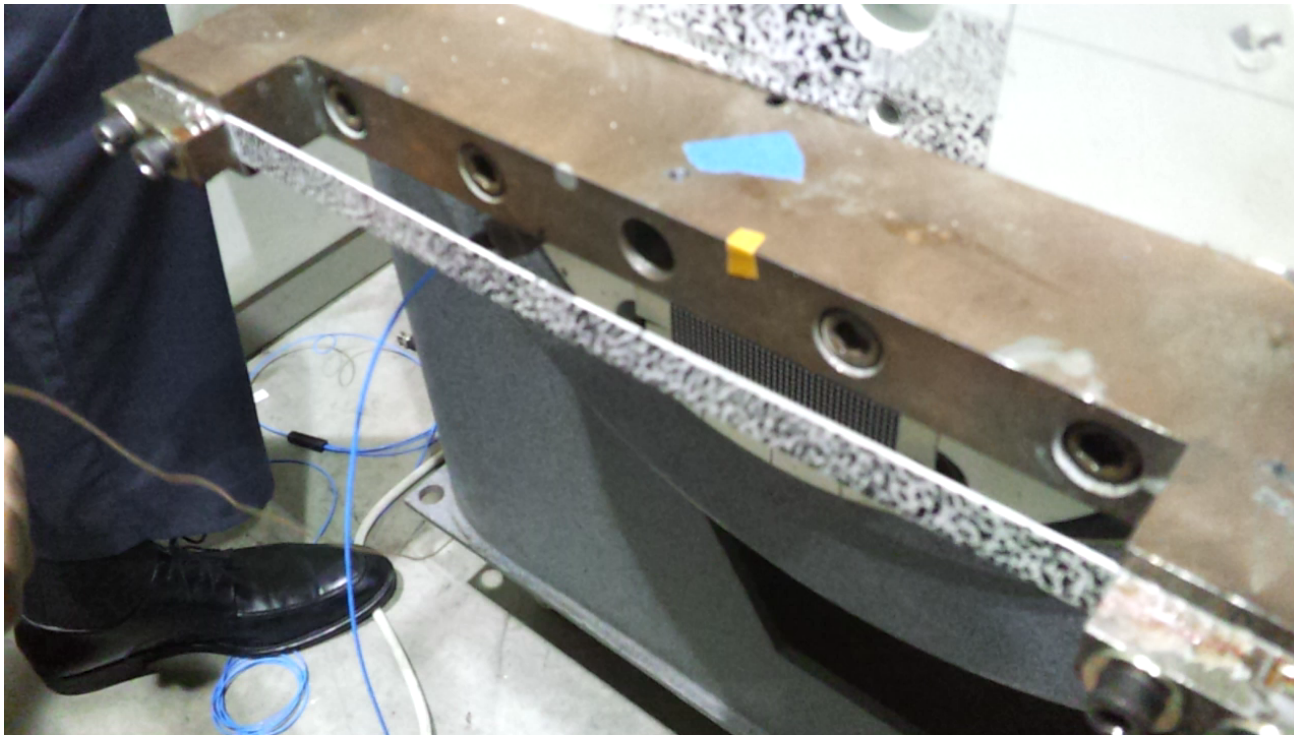


A continuous analog (buckled beam):

A thin elastic beam, axially-loaded beyond the Euler buckling load provides a continuous analog to the link model described a little earlier.

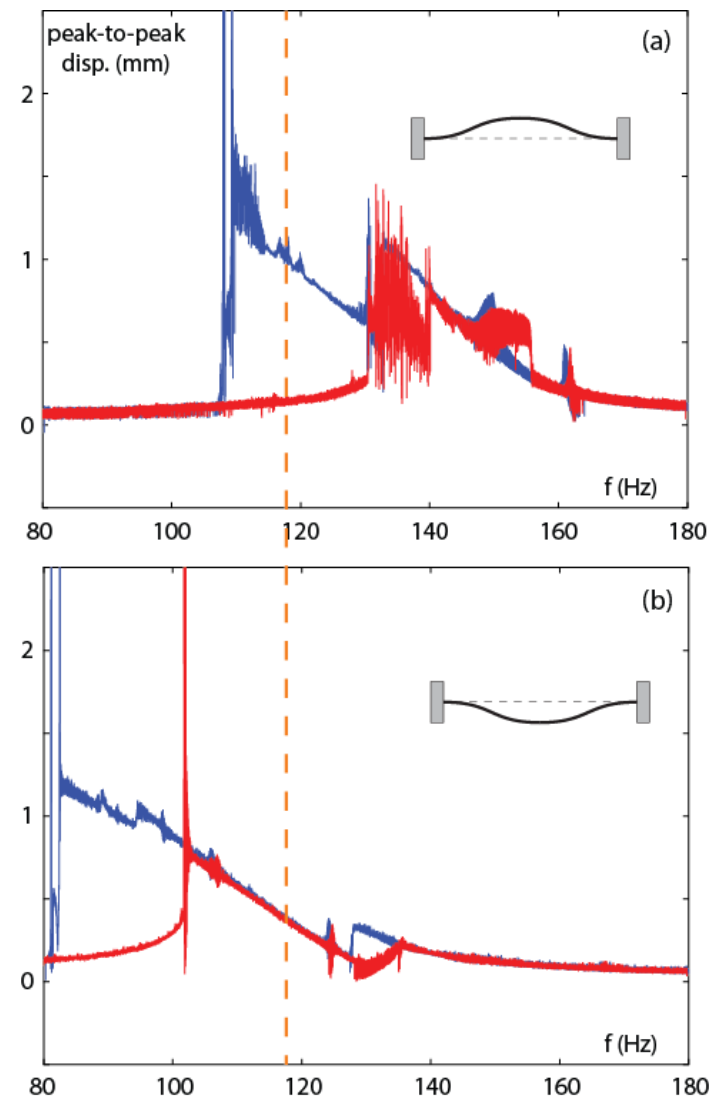


A slow sweep up, and then down

We now have an **infinite** dimensional phase space, but perhaps projecting initial conditions onto a 2D plane can still reveal the basins?

Again a slow sweep can reveal hysteresis. Let's look at one frequency to uncover the full sensitivity to initial conditions.

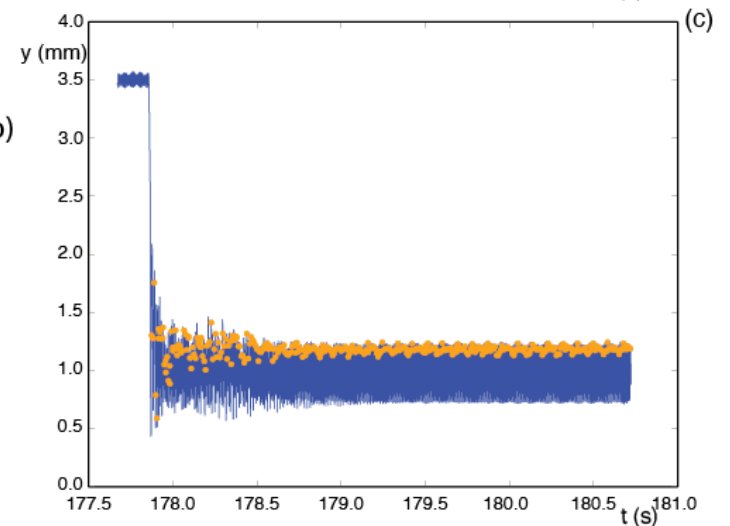
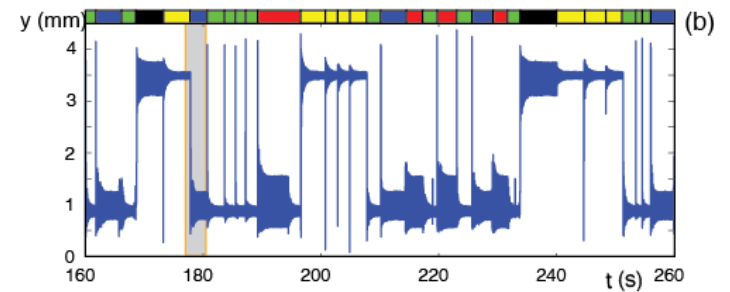
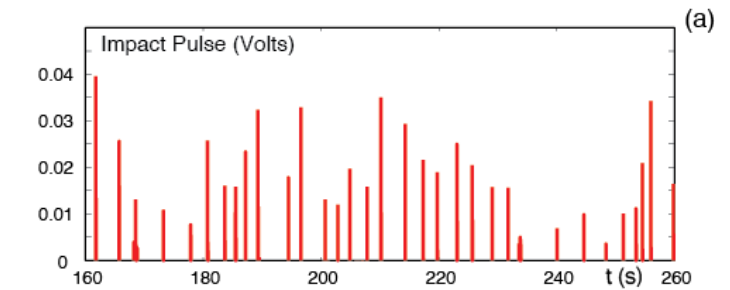
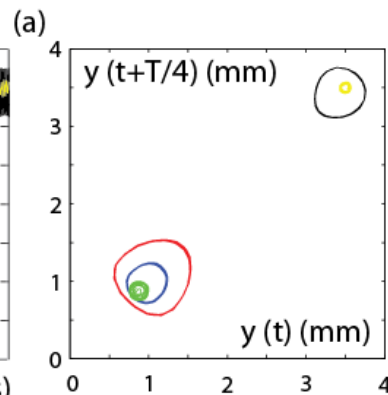
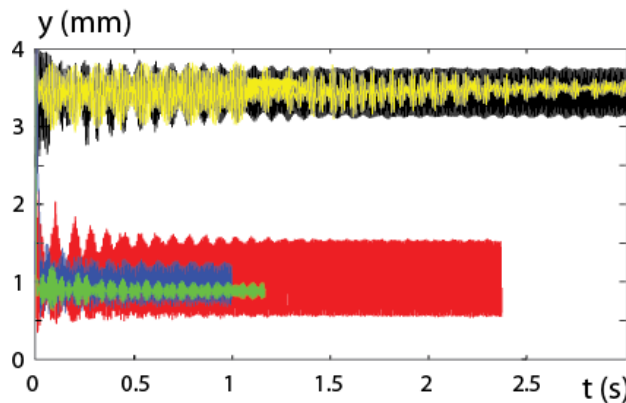
In this case we consider the competition between attractors that are **not** characterized by cross-well (snap-through) behavior.



The same basic approach is used

An instrumented impact **hammer** is used to induce many perturbations and a DIC (digital image correlation) stereo camera system used to track transient destinations.

At $f = 118$ Hz it is found that there are actually **five** co-existing periodic attractors.



time

The basins for the five attractors:

