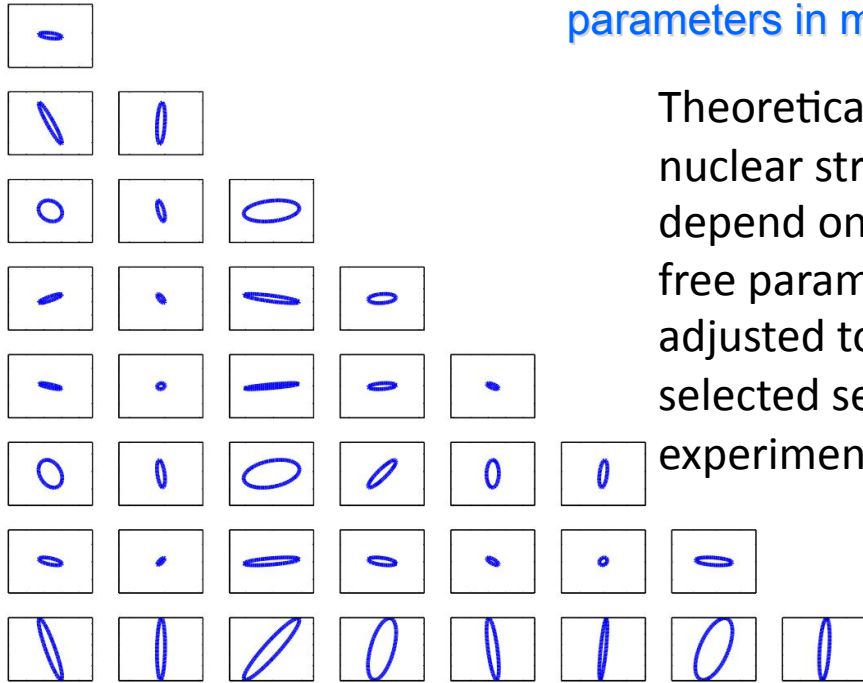


# Discovering the Secrets Buried in Theories

Sophisticated statistical models and massively parallel architectures extract the sensitivity of parameters in models of nuclear structure



Theoretical models of nuclear structure always depend on a number of free parameters that are adjusted to a carefully selected set of experimental data

- Reliable theories are those where:
  - All the free parameters are independent
  - Parameter values can be given an error bar (trust factor)
- State-of-the-art statistical methods combined with large-scale computer simulations allow us to perform such quality assessments

