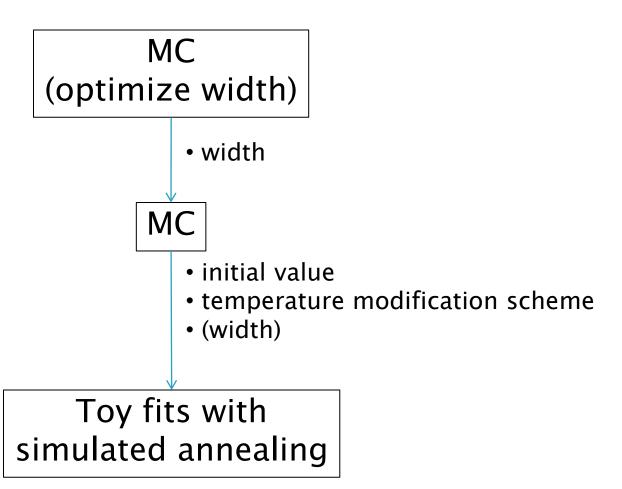
## Simulated annealing improvement

- Many fits are needed for studying the particle assignment ambiguities
  - First run Markov chain to understand quickly which combination is worth looking at in detail
  - Then run toy fits with simulated annealing for detail analysis
  - Currently, it takes a few days to finish 200 toy fits with simulated annealing
- Ideas on speeding up simulated annealing fits
  - Set the initial parameters based on the result of the Markov chain
  - Possibility of further optimization
    - Starting temperature
    - Temperature reduction steps
    - Number of iterations at each temperature

## Fit steps



## Chi2 vs. iteration

