

Supporting Information S2 Fig. Pairwise RMSD matrix of Ca atoms. The matrix elements are calculated every 2ns over the 800-ns MD trajectories of systems I-III [1]. The color scale shown on the right of the figure quantifies the similarity of the pairs' conformations. The pattern after 400 ns resembles that reported in ref. [1] and it is a signature of convergence [1]. The non-converged and converged substates are separated by black dotted lines.

## **Supporting References**

1. Grossfield A, Zuckerman DM (2009) Quantifying uncertainty and sampling quality in biomolecular simulations. Annual reports in computational chemistry 5: 23-48.