

Additional Information S2.

Scripts for building the models used in the article

The Python scripts provided in Scripts S1 (NTbuild.py and NTbuild_supp.py) contain the scripts for building all models used in this article. NTbuild.py will build all models for the figures in the main text. NTbuild_supp.py builds the additional models shown in the Supporting Figures. The .psc output files are all named in the following format: 'model_Fig*i*.psc' where *i* is the subfigure number, for example, the model for Figure 3Ai to 3Aiii is saved as 'model_Fig3.psc' and Figure 5Dii is saved as 'model_Fig5Dii.psc'.

Example of usage

The NTbuild.py file can be run in Python by the following command:

```
Python NTbuild.py
```

All .psc files are now saved in the StochPy/pscmodels folder. Using the following script in Python, Figure 3Bi-3Biii can be recreated:

```
import stochpy
smod=stochpy.NucleosomeSimulator(File='model_Fig3B.psc')
smod.DoMesoscopicStochSim(mode='time',end=100)
smod.PlotPatternDistributions()
smod.PlotSpeciesTimeSeries()
smod.PlotSpeciesDistribution()
```

Figure 3Biv must be loaded separately into NucleosomeSimulator:

```
smod.Model('model_Fig3Biv.psc')
smod.DoMesoscopicStochSim(mode='time',end=100)
smod.PlotSpeciesTimeSeries()
```