Plotting Code

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```
    Table = readtable('First6-Data.csv');
Table_3 = readtable('PAMData.csv');Table_4 = readtable('Last14Data.csv');I = 30;JI = 45;IJ=20;
beta = 0.005;N = 16;N_1 = 13;J=3;
lambda_mismatch = exp(-5/2);lambda_c = 0.25;lambda_p = 0.15;
couplings_ij1 = exp(N-J);couplings_ij2 = N-J;
hamiltonian_i1 = exp(couplings_ij1 * 1 * exp(lambda_mismatch * (N-J)));hamiltonian_i12 = exp(coupl
hamiltonian_i2 = exp(couplings_ij2 * 1) * exp(lambda_mismatch * (N-J));
func = @(X) (hamiltonian_i1.* exp(X))./(1 + (lambda_p .* exp(- beta * Table_3{IJ,8})) + (lambda_c
func_truncated = @(X) (hamiltonian_i1.* exp(X))./(1+(lambda_c .* exp(-beta * Table{I,8})) + (lambd
func_2 = @(X) (hamiltonian_i2.* exp(X))./(1 + (lambda_p .* exp(- beta * Table_3{IJ,8})) + (lambda_

func_truncated_2 = @(X) (hamiltonian_i2.* exp(X))./(1+(lambda_c .* exp(-beta * Table{I,8})) + (lam

func_truncated_ii1 = @(X) exp(hamiltonian_ii)./(1+(lambda_c .* exp(-beta * Table{I,8})) + (lambda_


% simulate FIRST CASE for base pair mismatch, with position of % binding, N = 16, with a SINGLE ba
normalization_1_bm = 1/((2*N)^3);normalization_1_bmis = 1/((
% simulate SECOND CASE for base pair mismatch, with % same position of binding, N = 16, but with a
normalization_2_bm =  normalization_2_bmis =
% simulate THIRD CASE for base pair mismatch, with % same position of binding, N = 16, but with Tw



% simulate FOURTH CASE of


hamiltonian_test_13 = exp(-((normalization * (((13-1)+(13-2)+(13-3)+(13-4)+(13-5)+(13-6)+(13-8)+(1
hamiltonian_test_16 = exp(-((normalization * (((16-1)+(16-2)+(16-3)+(16-4)+(16-5)+(16-6)+(16-8)+(1

func_truncated_ii_test_2 = @(X) exp(hamiltonian_ii_test)./(1+(lambda_c .* exp(-beta * Table{I,8}))









func_TEST = @(X) (hamiltonian_i1.* exp(X))./(1 + (lambda_p .* exp(- beta * Table_3{IJ,8})) + (lamb
```