

Abstract Submitted
for the MAR16 Meeting of
The American Physical Society

The impact of non-uniform capsid charge density on virus assembly¹ SIYU LI, GONCA ERDEMCI-TAN DOGAN, University of California,riverside, JEF WAGNER, Lawrence University, ROYA ZANDI, University of California,riverside — Many spherical viruses efficiently encapsulate their genome into shells (capsids) with icosahedral symmetry. Under many circumstances, this process is spontaneous and is primarily driven by the electrostatic interaction between positively charged capsid proteins and negatively charged genome. Through the free energy minimization of a generic potential, we calculate the optimal encapsulated genome length. In this talk, I will present our results due to a non-uniform charge distribution on the shell and its impact on the optimal size of encapsulated genome.

¹This work was supported by the National Science Foundation through Grant No. DMR-13-10687.

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Date submitted: 05 Nov 2015

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