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A Simple Model for Immature Retrovirus Capsid Assembly[1] STEFAN PAQUAY, PAUL VAN DER SCHOOT, Eindhoven University of Technology, The Netherlands , BOGDAN DRAGNEA, Indiana University, Bloomington, Indiana — In this talk I will present simulations of a simple model for capsomeres in immature virus capsids, consisting of only point particles with a tunable range of attraction constrained to a spherical surface. We find that, at sufficiently low density, a short interaction range is sufficient for the suppression of five-fold defects in the packing and causes instead larger tears and scars in the capsid. These findings agree both qualitatively and quantitatively with experiments on immature retrovirus capsids, implying that the structure of the retroviral protein lattice can, for a large part, be explained simply by the effective interaction between the capsomeres.

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