Ion Distribution around DNA: Can Transitions Be Observed?
KURT ANDRESEN, LISA KWOK, XIANGYUN QIU, HYE YOON PARK, JESSICA LAMB, LOIS POLLACK, Cornell University — The spatial distribution of counterions that reduce or neutralize the charge of biopolymers is fundamentally important in determining how these polymers interact with each other and with their surroundings (i.e. with charged surfaces). We will discuss recent anomalous small-angle x-ray scattering (ASAXS) experiments that quantify the distribution of ions around DNA strands in solution. This counterion atmosphere has been studied as a function of a variety of experimental conditions, including those known to lead to structural transitions of the biopolymer.