

Abstract Submitted
for the MAR08 Meeting of
The American Physical Society

Sugar pucker in nucleosides as a function of pressure SCOTT LEE,
University of Toledo — Infrared and Raman experiments of adenosine (rA), deoxyadenosine (dA), cytidine (rC) and deoxycytidine (dC) have been performed at room temperature as a function of pressure. Phase transitions are observed to occur near 2 and 4 GPa in rA and dA and near 4 GPa in rC and dC. Based on theoretical calculations of the vibrational frequencies, these transitions appear to be due to changes in the sugar moiety. The most likely explanation is that the sugar pucker changes at these pressures. These observations are relevant to our understanding of the A-to-B transition observed in DNA.

Scott Lee
University of Toledo

Date submitted: 26 Nov 2007

Electronic form version 1.4