

Abstract Submitted
for the MAR09 Meeting of
The American Physical Society

Temperature Dependent Local Structure of $\text{LaO}_{1-x}\text{F}_x\text{FeAs}$ T.A. TYSON, T. WU, NJIT, J. WOICIK, B. RAVEL, NIST, A. IGNATOV, C. ZHANG, Rutgers University, Z. QIN, T. ZHOU, NJIT, S.-W. CHEONG, Rutgers University — The local structure of the parent and doped $\text{LaO}_{1-x}\text{F}_x\text{FeAs}$ compounds were studied by x-ray absorption spectroscopy. The Fe-As correlations are well modeled by an Einstein model with no low temperature anomalies. While the Einstein temperatures are identical for the doped (11%) and undoped samples, the doped sample is found to have a lower level of static disorder in the Fe-As distribution. For the Fe-Fe correlation, doping enhances the effective Einstein temperature. Comparisons with the temperature dependent structure of the simpler $\text{FeSe}_{0.88}$ systems will be made. This work is supported by DOE Grant DE-FG02-07ER46402.

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Date submitted: 26 Nov 2008

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