Abstract Submitted
for the MAR05 Meeting of
The American Physical Society

Effect of pressure on the superconducting transition temperature of doped and neutron-damaged MgB_2 SERGEY BUD'KO, RUDEGER H. T. WILKE, N. MANUEL ANGST, PAUL CANFIELD, Ames Laboratory and Dept. of Physics, Iowa State University — Measurements of the superconducting transition temperature for Al-doped, C-doped and neutron-damaged-annealed MgB_2 samples under pressure up to ~ 8 kbar are presented. The dT_c/dP values change systematically with the decrease of the ambient pressure T_c in a regular fashion for each group of the samples. The evolution of the pressure derivatives can be understood assuming that the change in phonon spectrum is a dominant contribution to dT_c/dP.

Sergey Bud'ko
Ames Laboratory

Date submitted: 28 Nov 2004 Electronic form version 1.4