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Isotope effects in HTS cuprates: pressure, anisotropy, impurities and pseudogap. JEFFERY TALLON, MacDiarmid Institute, Industrial Research Ltd and Victoria University, JAMES STOREY, Victoria University, GRANT WILLIAMS, MacDiarmid Institute, Industrial Research Ltd, NSWAMY SURESH, MacDiarmid Institute, Industrial Research Ltd — The oxygen isotope effect on Tc and the superfluid density in high-Tc superconductor cuprates has been investigated as a function of pressure, anisotropy, impurity scattering and pseudogap correlations. The doping dependent effects observed are fully consistent with the calculated behaviour in the presence of scattering and depleted normal-state electronic density of states. Like so many other physical properties they reveal a critical doping state where the pseudogap abruptly closes.

Jeffery Tallon
MacDiarmid Institute, Industrial Research Ltd and Victoria University

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