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**Effect of Global Anisotropy on Superfluid $^3$He in Compressed Aerogels**[1] P. BHUPATHI, B. H. MOON, M. GONZALEZ, Y. LEE, Department of Physics, University of Florida, Gainesville, FL 32611-8440, N. MULDERS, Department of Physics and Astronomy, University of Delaware, Newark, DE 19716 — The importance of anisotropic scattering on the superfluid phases of $^3$He has been addressed recently and experiments using uniaxially distorted aerogel have been proposed in order to elucidate the influence of global anisotropy on the A-B transition [2,3]. We performed high frequency transverse acoustic impedance measurements on superfluid $^3$He confined in 98% porosity aerogel at 29 bar. The aerogel cylinder is compressed along the symmetry axis to generate global anisotropy. With 10% axial compression, our measurements reveal that the A-like to B-like transition is absent on cooling down to $\approx$300 $\mu$K in the absence of magnetic field and in magnetic fields up to 3 kG. This behavior is in contrast to that in uncompressed aerogels, in which the supercooled A-like to B-like transitions have been identified by various experimental techniques. Our results are consistent with the theoretical prediction by Aoyama and Ikeda.

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[2]C. L. Vicente *et al.*, Phys. Rev. B 72 094519 (2005).
[3]Kazushi Aoyama and Ryusuke Ikeda, Phys. Rev. B 73, 060504(R) (2006).

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