

Abstract Submitted
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Puzzling KT onset slope from third sound measurements with layered helium films on carbon nanotubes GARY WILLIAMS, EMIN MENCHEKANIAN, VITO IAIA, MINGYU FAN, CHAOWEI HU, FUFANG WEN, Univ of California - Los Angeles — Third sound measurements of thin ^4He films adsorbed on multiwall carbon nanotubes 10 nm in diameter show layer-completion effects at 3, 4, and 5 atomic layers. Temperature sweeps at fixed film thickness show Kosteritz-Thouless onset behavior (a sudden rise in dissipation), but a puzzle is that the slope of the onset temperature with film thickness is only about 1/2 of the KT universal value. Speculation about the role of carbon-atom induced modulation of the film thickness will be discussed

Gary Williams
Univ of California - Los Angeles

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