Abstract Submitted
for the MAR10 Meeting of
The American Physical Society

Cryomagnetic Scanning Tunneling Spectroscopy of Superconducting $FeSe_{1-x}Te_x$ Single Crystals[1] JOHN Y.T. WEI, IGOR FRIDMAN, University of Toronto and Canadian Institute for Advanced Research, KUO-WEI YEH, MAW-KUEN WU, Institute of Physics, Academia Sinica,Taiwan — We report cryomagnetic scanning tunneling spectroscopy measurements on single crystals of the iron-based superconducting compound $FeSe_{1-x}Te_x$. Atomically-resolved conductance spectra are observed down to 300 mK and up to 5 Tesla. A gap structure is seen against a linear spectral background, showing non-trivial spatial variation, temperature dependence and field evolution. We discuss our data in relation to possible doping inhomogeneities and other recent spectroscopic measurements on iron-based superconductors.

[1]Work supported by NSERC, CFI/OIT, OCE, the Canadian Institute for Advanced Research and the Taiwan National Science Council.

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Date submitted: 20 Nov 2009 Electronic form version 1.4