Local density of states in electronic nematic phase HYEONJIN DOH, HAE-YOUNG KEE, University of Toronto — We study spatial patterns of local density of states in electronic nematic phase in the presence of a non-magnetic impurity. Since the Fourier transform of the spatial pattern represents the symmetry of an electronic structure of a system, the local density of state can be a direct probe for the isotropic-nematic phase transition. In this work, we show local density of states near the nematic-isotropic phase transition tuned by a magnetic field, and discuss its application to the bilayer ruthenate, $Sr_3Ru_2O_7$.

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