

Abstract Submitted
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A RIXS study on Spin and Charge Excitations in Electron-Doped Cuprates, NCCO WEI-SHENG LEE, SLAC National Accelerator Lab., JAMES J. LEE, Department of Physics, Stanford University, WOJCIECH TABIS, MARTIN GREVEN, The School of Physics and Astronomy, University of Minnesota, THOMAS. P. DEVEREAUX, SIMES, SLAC National Accelerator Lab. & Stanford University, THORSTEN SCHMIT, Swiss Light Source, Paul Scherre Inst., Z.X. SHEN, SIMES, SLAC National Accelerator Lab. & Stanford University — The phase diagram of the high-Tc cuprates is known to exhibit intriguing asymmetric doping evolution between the hole and electron-doping. ARPES and inelastic neutron scattering experiments have been extensively applied to study cuprates on both sides of the phase diagram, revealing a distinct Fermi surface evolution between the hole- and electron-doped cuprates, and the properties of low energy spin excitations. In this presentation, I will report high energy spin excitations and charge excitations of electron-doped cuprates, $\text{Nd}_{2-x}\text{Ce}_x\text{CuO}_4$, measured via resonant inelastic x-ray scattering (RIXS) at the Cu L-edge. The doping evolution of these excitations and their differences with those of the hole-doped cuprates will be discussed.

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