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ARPES studies of underdoped (Ba,K)Fe2As2 iron-based superconductors MING YI, Stanford Institute for Materials and Energy Sciences, Stanford University, DONGHUI LU, SSRL, SLAC National Accelerator Laboratory, YONGTAO CUI, Stanford Institute for Materials and Energy Sciences, Stanford University, MAKOTO HASHIMOTO, SSRL, SLAC National Accelerator Laboratory, BRIAN MORITZ, Stanford Institute for Materials and Energy Sciences, Stanford University, HAIHU WEN, Nanjing University, THOMAS DEVEREAUX, ZHI-XUN SHEN, Stanford Institute for Materials and Energy Sciences, Stanford University — Phase competition is a topic of high interest in the high temperature superconductivity (HTSC) field as HTSC occurs in proximity to competing phases in both cuprates and iron pnictides. In the pnictides, phase competition to superconductivity takes form in both a tetragonal to orthorhombic structural transition and a collinear spin-density wave transition. In this talk, I will present our ARPES studies of underdoped (Ba,K)Fe2As2, in which distinct spectroscopic signatures associated with all three transitions (structural, SDW, and superconductivity) are observed. The interaction of these three order parameters will be discussed.

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