Abstract Submitted
for the MAR13 Meeting of
The American Physical Society

Orbital Dependent Band Renormalization in $Fe_{1+y}Te_{1-x}Se_x$
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One of the important factors in understanding the Fe-based superconductor is their multi-orbital nature. In this study we present ARPES results on the iron chalcogenide $Fe_{1+y}Te_{1-x}Se_x$ (known as the 11 system), the structurally simplest member in Fe-based superconductors. Our result shows that as Te substitutes Se, the Fe dxy orbital has seen a significant increase in the band renormalization while the other orbitals stay unchanged. Our discovery indicates that different orbitals in Fe-based superconductors have different correlation levels, evolve distinctively with crystal parameters and may play different roles in the emergence of superconductivity.

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Date submitted: 09 Nov 2012 Electronic form version 1.4