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Abstract for an Invited Paper
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**Quantum oscillation measurements and their reconciliation with ARPES results in underdoped cuprates**[1]

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A current conundrum relating to the normal state electronic structure of the underdoped cuprates is the apparent dichotomy between photoemission and quantum oscillations measurements. New quantum oscillation measurements performed over an extended regime on underdoped YBCO are presented that bring results of these two techniques into closer agreement. Further, from the latest quantum oscillation results, we are able to distinguish between various scenarios involving single or multiple carrier types − we show that the experimental findings are only consistent with one of these possibilities. *Work performed in collaboration with N. Harrison, M. Altarawneh, P. A. Goddard, R. Liang, W. N. Hardy, D. A. Bonn, and G. G. Lonzarich

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