

Abstract Submitted  
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**Fermi surface arcs and the infrared conductivity of underdoped  $\text{YBa}_2\text{Cu}_3\text{O}_{6.5}$** <sup>1</sup> JUNGSEEK HWANG, University of Florida, JULES P CARBOTTE, THOMAS TIMUSK, McMaster University — Using recent finding, that the electronic states lost below the pseudogap energy ( $\Delta_{pg}$ ) are recovered in the energy region immediately above it, we analyze the in-plane far infrared conductivity data in underdoped orthoII  $\text{YBa}_2\text{Cu}_3\text{O}_{6.5}$  and are able to find evidence for the opening of a pseudogap on part of the Fermi surface with the remaining ungaped piece proportional to the temperature. These results are similar to recent angle-resolved photoemission spectroscopy data in underdoped  $\text{Bi}_2\text{Sr}_2\text{CaCu}_2\text{O}_{8+\delta}$ .

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