

Abstract Submitted  
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**Spin fluctuations on the verge of Mott localization<sup>1</sup>** HIMADRI  
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Centre for Advanced Scientific Research, Bengaluru 560064, India — We investigate  
the effects of local, transverse spin fluctuations on transport and thermodynamic  
quantities in the proximity of a paramagnetic Mott transition. Low temperature  
Fermi liquid coherence is seen to cross over to universal power laws in resistivity,  
optical conductivity and specific heat at higher temperatures and frequencies. Strik-  
ing agreement with the normal phase properties of LSCO and BSSCO series of high  
temperature superconductors (HTS) is found. We conclude that the anomalous  
properties of HTS above the superconducting dome originate from spin fluctuation  
scattering concomitant to Mott localization.

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