

Abstract Submitted
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Strong correlations on a triangular lattice: spectral weight suppression on the cobaltates. DIMITRIOS GALANAKIS, Univ. of Illinois at Urbana-Champaign, TUDOR STANESCU, University of Maryland, PHILIP PHILLIPS, Univ. of Illinois at Urbana-Champaign — Two experimental puzzles of strong correlations of the cobaltates ($\text{Na}_x \text{CoO}_2$) are investigated. First the experimental claims that the optical conductivity displays a pseudogap feature. Second the suppression of spectral weight near the chemical potential in the removal spectrum of the $x=0.3$ material. We address this questions using the 2D Hubbard model in the triangular lattice in the framework of Cluster Dynamical Mean field theory (CDMFT). For $x=0.3$ we find a suppression of the spectral weight slightly above the chemical potential. The integrated optical conductivity displays no significant transfer of spectral weight from low to high energy as it would be indicative of a pseudogap. Comparison is made with single site, three site and four site clusters.

Dimitrios Galanakis
Univ. of Illinois at Urbana-Champaign

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