

Abstract Submitted
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'CMR' Manganites: Strongly or Weakly Correlated?¹ ANDREW MILLIS, SATOSHI OKAMOTO — A newly developed “semiclassical impurity solver” [1] is used to perform dynamical mean field calculations of the kinetic energy, optical conductivity and magnetic transition temperature of the two-orbital double-exchange model for colossal magnetoresistance manganites, including the full Kanamori ($U - U' - J$) interactions for the e_g multiplet as well as the $e_g - t_{2g}$ Hunds coupling J_H . The effective correlation strength is shown to be weak in the ferromagnetic ground state, while in the high temperature paramagnetic state the multiplet interactions block many of the possible final states, leading to an effectively strongly correlated situation characterized by a large effective J_H .
[1] S. Okamoto et. al., Phys. Rev. **B71** 235113 (2005).

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