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Mottness scenario for non-Fermi liquid behavior in the periodic Anderson model within dynamical mean-field theory GIOVANNI SORDI, ADRIANO AMARICCI, MARCELO ROZENBERG, Laboratoire de Physique des Solides, CNRS-UMR8502, Universite de Paris-Sud, Orsay 91405, France — We study the Mott metal-insulator transition in the periodic Anderson model within dynamical mean-field Theory (DMFT). Near the quantum transition, we find a non-Fermi liquid metallic state down to a vanishing temperature scale. We identify the origin of the non-Fermi liquid behavior as due to magnetic scattering of the doped carriers by the localized moments. The non-Fermi liquid state can be tuned by either doping or external magnetic field. Our results show that the coupling to spatial magnetic fluctuations (absent in DMFT) is not a prerequisite to realize a non-Fermi liquid scenario for heavy fermion systems. Refs: *Phys. Rev. Lett.* **99**, 196403 (2007); *Phys. Rev. Lett.* **101**, 146403 (2008).

Giovanni Sordi
Laboratoire de Physique des Solides, CNRS-UMR8502,
Universite de Paris-Sud, Orsay 91405, France

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