



LUDWIG-
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ARNOLD SOMMERFELD
CENTER FOR THEORETICAL PHYSICS



Sommerfeld Theory Colloquium

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Orbital-Selective Mott phases: A New Paradigm in Correlation Physics

Non-Fermi liquid behavior is observed experimentally in a variety of strongly correlated electron materials, but remains poorly understood. Among the interesting theoretical concepts is that of an orbital-selective Mott phase, where conduction electrons undergo a partial Mott localization. This concept is intimately related to the breakdown of the Kondo effect in heavy-fermion metals. In this talk, I will review the basic ideas and available theories for orbital-selective Mott behavior, construct a "global" phase diagram, and discuss proposals for its experimental realization in heavy-fermion compounds, iron-pnictide superconductors, and cuprates.

Wednesday, 8th December 10, 10:30 h, Room 348 / 349, Theresienstr. 37 / III

Prof. V. Mukhanov