

Abstract Submitted
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Superconductivity due to cooperative two-channel Kondo effect

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We discuss the application of the co-operative two-channel Kondo model to describe the low temperature properties of the Ce and Pu- based 115's. Based on the crystal field multiplet structure for Ce and Pu ions in tetragonal symmetry, we employ the group theory to justify the validity of the two-channel Kondo physics. Additional screening channel contributes to destabilization of the Fermi liquid and leads to development of the heavy Fermi surface. The fluctuations between the zero modes for the Kondo singlets leads to divergent composite pair susceptibility.

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