Electronic band structure of Pr-based filled skutterudite antimonides\(^1\) J.W. ALLEN, B.J. KIM, RAVI S. SINGH, University of Michigan, O. KRUPIN, J.D. DENLINGER, Lawrence Berkeley National Lab, R.E. BAUMBACH, M.B. MAPLE, UC San Diego — Filled skutterudites exhibit a wide range of strongly correlated electron phenomena including heavy fermion, superconductivity, non-Fermi liquid and quantum critical behaviors. Knowledge of the electronic structures of these materials is almost entirely from band calculations and dHvA studies. We present the first angle-resolved photoemission spectroscopy (ARPES) measurements of the filled skutterudites antimonides: PrOs\(_4\)Sb\(_{12}\) and PrRu\(_4\)Sb\(_{12}\). Band dispersions and Fermi surface maps of these three-dimensional materials will be discussed and compared to available LDA band structure calculations.

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