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The magnetic and superconducting phase diagram of $\mathbf{PrFeAsF}_x\mathbf{O}_{1-x}$[1] COSTEL R. ROTUNDU, STEPHEN D. WILSON, Materials Sciences Division, Lawrence Berkeley National Laboratory, Berkeley, CA 94720, USA, BYRON K. FREELON, Department of Physics, University of California, Berkeley, CA 94720, USA, EDITH BOURRET-COURCHESNE, Materials Sciences Division, Lawrence Berkeley National Laboratory, Berkeley, CA 94720, USA, ROBERT J. BIRGENEAU, Department of Physics, University of California/ Materials Sciences Division, Lawrence Berkeley National Laboratory, Berkeley, CA 94720, USA — The electronic phase diagram of the newly discovered iron pnictide superconductors $RFeAsO_{1-x}F_x$ (R=rare-earth) is of great interest and with implications in the understanding of the nature of superconductivity (SC) itself. Predicted by *ab initio* calculations [1] and pointed by resistivity measurements [2], the relevance of a quantum critical point remains controversial in the light of the structural phase transition between the magnetic SDW and SC [3]. We present a detailed magnetic and superconducting phase diagram of $PrFeAsO_{1-x}F_x$ as inferred from magnetic susceptibility and resistivity measurements. References: [1] G. Giovannetti *et al.*, Physica B **403**, 3653 (2008) [2] R. H. Liu *et al.*, Phys Rev Lett **101**, 087001 (2008) [3] H. Luetkens et al., cond.mat:0806.3533

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