

Abstract Submitted
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Phase Transitions at the $\text{Cr}_{1-x}\text{V}_x/\text{W}(110)$ System OLEG KRUPIN, Department of Physics, University of Oregon, Eugene, Oregon, ELI ROTENBERG, Advanced Light Source, Lawrence Berkeley National Laboratory, Berkeley, California, STEVE KEVAN, Department of Physics, University of Oregon, Eugene, Oregon — The rich phase diagram of thin films of chromium-vanadium ($\text{Cr}_{1-x}\text{V}_x$) alloys offers a unique possibility to study the phenomena associated with the spin-density wave (SDW) ground state and quantum phase transition (QPT). Using angular-resolved photoemission (ARP) we have studied the periodicity of SDW in the region of commensurate-incommensurate phase transition followed by quantum phase transition as a function of two non-thermal parameters: film thickness and vanadium concentration. That allows probing the interplay between spatial confinement and Fermi surface topology change resulting from modification of chromium electron structure by vanadium doping.

Oleg Krupin
Department of Physics, University of Oregon, Eugene, Oregon

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