ARPES of two-dimensional modulated structures

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I will briefly discuss the results of recent ARPES experiments, which show different aspects of the electronic properties of modulated two-dimensional systems.

- In the layered materials *1T*-TaS_2 and *1T*-$TaSe_2$ the interplay of a a charge-density-wave and electronic correlations induce a bandwidth-controlled metal-insulator transition. ARPES reveals the disappearance of the coherent quasiparticle weight at the transition, but also the signatures of a hidden periodicity, which we interpret as evidence for short-range magnetic fluctuations.
- The "moiré" superstructure observed for an ordered monolayer of Pb grown on Ag(111) affects the dispersion of the interface states. The effect is negligible for the in-plane p_{xy} bands, but dramatic for p_z states. These data confirm that the strength of the coupling to a periodic modulation, rather than its periodicity, is the crucial factor determining the electronic structure of modulated phases.