

Abstract Submitted  
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**Transport properties of disordered iron-pnictides in case of coexistence between superconducting and spin-density wave order**<sup>1</sup> DUSHKO KUZMANOVSKI, MAXIM VAVILOV, University of Wisconsin - Madison — We present a theoretical description of the transport properties of a dirty multi-band superconductor in the case when both superconducting and spin-density wave orders coexist. We focus on differential conductance spectra of normal metal-superconductor junctions. In pure SC phase, we demonstrate that the interband impurity scattering broadens the coherent peak near the superconducting gap and significantly reduces its height even at relatively low scattering rates. This broadening is consistent with a number of recent experiments performed for both tunnel junctions and larger diffusive contacts. We further analyze the effect of the SDW order parameter on the differential conductance and other transport properties in the coexistence phase.

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