

## Spin-orbit coupling in Fe-based superconductors

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Determination of the gap symmetry is an important step towards uncovering the mechanism of superconductivity in Fe-based materials. One of the key experiments in support of the  $s_{\pm}$  spin-fluctuation-mediated gap was the observation of the spin-resonance peak in many pnictides and chalcogenides. Recently, in inelastic polarized neutron scattering measurements, it was found that the peaks in the transverse and longitudinal components of the spin susceptibility exhibit rather different behavior. I will present arguments that this disparity arises from the spin-orbit coupling. It also leads to a relative shift of the two component's resonance frequency with lower one exhibiting larger enhancement.