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**Spin resonance in Luttinger liquid with spin-orbit interaction**

OLEG TRETIAKOV, K.S. TIKHONOV, V.L. POKROVSKY, Texas A&M University — The spin-orbit interaction leads to a narrow spin resonance at low temperatures, even in the absence of an external magnetic field [1]. We study the effect of electron-electron correlations on the resonance. These correlations are strong in quantum wires and cannot be neglected. We show that the electron correlations change the shape and width of the resonance and produce an additional weak resonance at the plasmon frequency.

[1] Ar. Abanov, V. L. Pokrovsky, W. M. Saslow, and P. Zhou, arXiv:1008.1225.

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