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**Zeeman splitting and subband spacing in ballistic $Ga_{0.25}In_{0.75}As/InP$ quantum point contacts** THEODORE MARTIN, A. SZORKOVSZKY, University of New South Wales, C.A. MARLOW, University of Oregon, L. SAMUELSON, Lund University, H. LINKE, University of Oregon, R.P. TAYLOR, University of Canterbury, A.P. MICOLICH, A.R. HAMILTON, University of New South Wales — Spin-resolved transport in low-dimensional, solid state systems is a leading area of research at the nanoscale, due to potential device applications that combine quantization with the spin degree of freedom. The realization of such devices requires both a well-resolved energy level spectrum and a large splitting of the spin-degeneracy. Here we investigate the transport properties of a ballistic quantum point contact (QPC) etched into a high indium content strained GaInAs/InP heterostructure, a system with strong spin-orbit coupling and large 1D subband spacings. We have measured the 1D subband spacing using two independent methods, and find it to be $\sim$10 meV, with a very steep confining potential. We also present data studying the Zeeman splitting of the 1D subbands for different magnetic field orientations.

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