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**Analyzing the influence of magnetic domain walls on longitudinal and transverse magnetoresistance in tensile strained (Ga,Mn)As** GANG XIANG, Dept. of Physics, Ohio State University, NITIN SAMARTH, Dept. of Physics, Penn State University — We present a theoretical analysis of magnetoresistance in (Ga,Mn)As epilayers with perpendicular magnetic anisotropy [Phys. Rev. B **76**, 054440 (2007)]. The model reproduces the field-antisymmetric anomalies observed in experimental measurements [Phys. Rev. B **71**, 241307(R) (2005)] of the longitudinal magnetoresistance in the planar geometry (magnetic field in the epilayer plane and parallel to the current density), as well as the unusual shape of the accompanying transverse magnetoresistance. As in the case of metallic ferromagnets with perpendicular anisotropy [Phys. Rev. Lett. **94**, 017203 (2005), the magnetoresistance characteristics are attributed to circulating currents created by the presence of magnetic domain walls.

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