Erratum: High-field magnetoconductivity of electrons on hydrogen [Phys. Rev. B 37, 3805 (1988)]

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The expression for σ_{xx} appearing in Eq. (2) is in error. The correct expression includes a contribution from both spin species, and can be written as

$$\sigma_{xx} = \frac{ae^2}{2\pi\hbar} \int_{-\infty}^{\infty} dE \left[\frac{-\partial f}{\partial E} \right] \sum_{N=0}^{\infty} (N + \frac{1}{2}) \left[\exp \left[\frac{-4(E - E_N - \Delta S)^2}{\Gamma^2} \right] + \exp \left[\frac{-4(E - E_N + \Delta S)^2}{\Gamma^2} \right] \right],$$

where $\Delta S = g\mu_B B/2$ and α is an adjustable parameter. Theoretically α should be unity but we obtained reasonably good fits with $\alpha = 2$. The origin of this discrepancy, which was also observed by Van De Sanden et al. (Ref. 8), is not under-

The density of states used in the above expression for σ_{xx} is

$$D(E) = \frac{1}{2\pi l_0^2} \left(\frac{2}{\pi} \right)^{1/2} \frac{1}{\Gamma} \sum_{N=0}^{\infty} \left[\exp\left(\frac{-2(E - E_N - \Delta S)^2}{\Gamma^2} \right) + \exp\left(\frac{-2(E - E_N - \Delta S)^2}{\Gamma^2} \right) \right],$$

which is equivalent to that quoted in Eq. (4). However, one can easily show using the above expression that, after normalizing, σ_{xx} is independent of ΔS and the Zeeman splitting plays no role in the transport.

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