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

P. W. Adams and M. A. Paalanen

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

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

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 $\alpha\simeq 2$. The origin of this discrepancy, which was also observed by Van De Sanden *et al.* (Ref. 8), is not understood.

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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