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Spin transition in the second Landau level¹

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The fractional quantum Hall effect (FQHE) states in the second Landau level have attracted growing interest and intensive theoretical and experimental investigations due to their being non-Abelian states. Recently, we systematically examined the spin polarization of the $8/3$ and $12/5$ states in a series of high quality two dimensional electron systems. Evidence of spin transition was observed for both states, suggesting a more complicated nature of the FQHE ground states in the second Landau level.

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