

How can one observe non-abelian statistics?

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There is ample evidence that the quantum Hall effect observed at filling fraction $5/2$ is caused by the formation of a quantum liquid with peculiar properties. The most striking property is undoubtedly the statistics of the excitations, which is non-abelian. In this talk, I will review the recent experiments done on this system, which confirm the fractional charge $e/4$ of the excitations. After explaining the concept of non-abelian statistics, I will describe what kind of experiments have to be done to confirm that the excitations present in the $5/2$ quantum Hall effect indeed obey non-abelian statistics. I will conclude by presenting predictions which should be testable with current technology.