Identifying non-Abelian anyons with upstream noise.

Mykhailo Yutushui*[1] and David Mross[1]

[1]Weizmann Institute of Science – Israel

Abstract

Non-Abelian phases are among the most highly-prized but elusive states of matter. We show that upstream noise measurements can identify the putative non-Abelian fractional quantum Hall plateaus at filling factors $\$\nu = \frac{\{}{1}2\}\{5\}\$or in any half - filled Landau level. Interfacing these states with any readily - available Abelian state yields a binary outcome of upstream noise or no noise. Judicious choices of the Abelian states can produc - no outcomes that fingerprint the possible non - Abelian phase by ruling out its competitors.

*Speaker