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Probing Non-Abelian Statistics in the $\nu = 5/2$ Fractional Quantum Hall State PARSA BONDERSON, Caltech, ALEXEI KITAEV, Caltech, KIRILL SHTENGEL[1], shtengel@physics.ucr.edu — We analyse an interferometric experiment to detect non-Abelian quasiparticle statistics – one of the hallmark characteristics of the Moore-Read state expected to describe the observed FQHE plateau at $\nu = 5/2$. The implications for using this state for constructing a topologically protected qubit as has been recently proposed by Das Sarma, Freedman and Nayak are also addressed.

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