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Marcel Bischoff* (bischoff@ohio.edu). *A Notion of Quantum Symmetry*. Preliminary report.

A G -crossed braided extension of a unitary modular tensor category \mathcal{C} can be seen as a G -symmetry of a topological phase of matter associated with \mathcal{C} . Motivated by finite index inclusions of rational local conformal nets, I'll give a purely categorical notion of a more general "quantum symmetry". In particular, any finite index subnet of a rational local conformal net A gives rise to such a quantum symmetry for the representation category of A and the existence of a quantum symmetry is necessary for the existence of a finite index subnet. (Received January 20, 2018)