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Jens Fjelstad* (jens.fjelstad@kau.se), Karlstad University, Universitetsgatan 2, 65188 Karlstad, Sweden. *Some properties of quantum representations of mapping class groups*. Preliminary report.

I will discuss two properties of the projective representations of mapping class groups provided by a TQFT based on the modular category \mathcal{C} .

(i) Techniques developed to describe two-dimensional rational conformal field theory can be used to construct self intertwiners of quantum representations, providing reducibility criteria formulated in terms of \mathcal{C} .

(ii) Invertible objects in \mathcal{C} can be used to construct finite Heisenberg groups acting on quantum representations generalizing the situation in abelian theories and $\mathfrak{su}(2)$ theories where, for even levels, it implies a spin decomposition. (Received February 16, 2010)