Abstract

For a finite group G and a 4-cocycle $\omega∈Z^4(G,k×)$, we compute the center of the monoidal 2-category $2Vec^{\omega}_G$ of ω-twisted G-graded 1-categories of finite dimensional k-vector spaces. We show that this center is a braided monoidal 2-category with a trivial sylleptic center. This center gives a precise mathematical description of the topological defects in the associated 3+1D Dijkgraaf-Witten TQFT. This is a joint work with Liang Kong and Shan Zhou.