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Super-modular categories from near-group centers

A super-modular category is a unitary pre-modular category with Müger center equivalent to the symmetric unitary category of super-vector spaces. The modular data for a super-modular category gives a projective representation of the group: $\Gamma_\theta <$ $\mathrm{SL}(2, \mathbb{Z})$. Adapting work of Ng-Rowell-Wang-Wen, Cho-Kim-Seo-You computed modular data from congruence representations of Γ_θ using the congruence subgroup theorem for super-modular categories of Bonderson-Rowell-Wang-Z and the minimal modular extension theorem of Reutter-Johnson-Freyd. They found two classes of previously unknown modular data for rank 10 super-modular categories. We show that these data are realized by modifying the Drinfeld centers of near-group fusion categories associated with the groups $\mathbb{Z}/6$ and $\mathbb{Z}/2 \times \mathbb{Z}/4$. This is based on joint work with Eric Rowell and Hannah Solomon.