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Higher central charges and Witt groups.

We introduce the notion of the signature of a braided fusion category and prove its invariance under Witt equivalence. Moreover, the higher central charges of a pseudounitary modular category can be expressed in terms of its signature. We use this fact to prove that the Ising modular categories have infinitely many square roots in the Witt group. This result is further applied to prove a conjecture of Davydov-Nikshych-Ostrik on the super-Witt group. (Received January 14, 2021)