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Gutachten über die Bachelorarbeit von Christian Hansch (777219) „Einige Erkenntnisse zum Ising-Modell“.

I mostly agree with the report by Prof. Dr. Roelly, and would only like to add a few remarks.

Despite multiple lengthy discussions on how to best denote the configuration space in the different cases of empty/periodic/general boundary condition, Mr Hansch decided to ignore my suggestions, leading to a confusing notation (see pages 7-9).

On page 29, the statement “ [...] konvergieren gegen *die* Gibbs-Zustände [...]” is not precise, as it can be misinterpreted as a uniqueness result. In fact, what is proven is that the limit of the given finite-volume Gibbs states exists, and is an infinite-volume Gibbs state; it is not a previously defined infinite-volume Gibbs state that is proven to be the limit of the finite-volume sequence.

Although in the reference book (S. Friedli and Y. Velenik, *Statistical mechanics of lattice systems*) this point is not clearly explained, our lengthy discussions on the subject should have led to a more precise statement.

Furthermore, I would have appreciated an effort from Mr Hansch to provide his own figures, instead of getting all of them from the reference book.

In conclusion, while Mr Hansch delivered a final good product, the quality of the thesis does not reflect the amount of time required from the supervision. For this reason, I propose the grade of **Good (2,7)**.

Kind regards,

Alexander Zass