

Von: Ramona Wolf ramona.wolf@itp.uni-hannover.de

Betreff: Fwd: Your_manuscript XN10417B Bridgeman

Datum: 22. Februar 2020 um 17:04

An: Alexander Hahn alexander.hahn@htp-tel.de, Tobias J. Osborne tobias.j.osborne@gmail.com, Jacob Bridgeman jcbri@gmail.com

RW

Dear all,

we got a reply from Physical Review B. It seems that we need to restructure and rewrite parts of it (see below).

Best wishes,
Ramona

----- Weitergeleitete Nachricht -----

Betreff: Your_manuscript XN10417B Bridgeman

Datum: Sat, 22 Feb 2020 10:58:59 -0500

Von: prb@aps.org

Antwort an: prb@aps.org

An: ramona.wolf@itp.uni-hannover.de

Re: XN10417B

Gauging defects in quantum spin systems

by Jacob C. Bridgeman, Alexander Hahn, Tobias J. Osborne, et al.

Dear Dr. Wolf,

The above manuscript has been reviewed by one of our referees.
Comments from the report appear below.

These comments suggest that considerable revision of your paper may be in order. If you resubmit your manuscript, please include a summary of the changes made and a brief response to all recommendations or criticisms.

Yours sincerely,

Yonko Millev

Editor

Physical Review B

Email: prb@aps.org

<https://journals.aps.org/prb/>

In celebration of the 50th Anniversary of Physical Review A, B, C, and D, APS is offering 50% off open access article publication charges (APCs) in all hybrid journals for papers submitted during the 2020 calendar year. Additionally, Physical Review Research will continue to waive APCs through June 30, 2020. For details about APC pricing, see <https://journals.aps.org/authors/apcs>.

P.S. Another referee we consulted was not able to review your manuscript.

Report of the Referee -- XN10417B/Bridgeman

The main achievement of the manuscript at hand is a detailed study of a one-dimensional spin chain with defects. In particular, the authors demonstrate how the heavy mathematical machinery of category theory (in particular: fusion categories and bimodules) can be used to describe such a system. This part of the paper, i.e., Section IV, constitutes an interesting result that I believe is – in principle – suitable for publication in Physical Review B. However, that being said, I would like to emphasize that the title, abstract and introduction of the paper hint towards much more general results, and are misleading when compared to the actual content of the following sections. Therefore, I recommend careful revision and restructuring of the manuscript in the following sense:

- i) The introduction should be partly rewritten in order to correctly reflect the fact that the bulk of the paper presents a case study of a particular spin system with defects, not a general theory.
- ii) Section II does not contain any deep results when taken on its own, and therefore should be more clearly presented as introductory chapter leading up to Section IV. In its present form, Section II seems somewhat disconnected from the rest of the paper.