

Errata list

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Title of thesis: Interacting Dirac Matter

ISBN 978-91-7729-821-2

TRITA--SCI-FOU 2018:22

List of different types of corrections:

[1\) Reference to the source added in chapter 2.3, pages 21, 27, 31, 32, 33 & 34](#)

[48] Anders W. Sandvik and Juhani Kurkijärvi. Quantum monte carlo simulation method for spin systems. Phys. Rev. B, 43:5950–5961, Mar 1991.

[49] Anders W. Sandvik. Stochastic series expansion method with operator-loop update. Phys. Rev. B, 59:R14157–R14160, Jun 1999.

[50] Anders W. Sandvik. SSE algorithm and program for the S=1/2 Heisenberg antiferromagnet.

[2\) Page 18: Sec: 2.2 End of the second paragraph](#)

The pair state \rightarrow the pair operator.

[3\) Page 25: Eq. \(2.26\)](#)

The partition function should be $\mathcal{Z} = \text{Tr}\{e^{-\beta H}\}$

[4\) Equation reference added in page 26](#)

Eq. (2.13) (missing in the original version)

[5\) Equation fixed. Latex to PDF conversion in page 68](#)

$$\text{Eq. 3.57} \rightarrow \delta(t) = \lim_{\epsilon \rightarrow 0} \frac{1}{\pi} \frac{\epsilon^2}{\epsilon^2 + t^2}$$

[6\) Page 74: Eq. \(3.66\)](#)

The negative sign is missing. The formula should be read as

$$\frac{\Delta E}{E} = \frac{\left[E(6^\circ K) - E_g(6^\circ K) \right] - \left[E(20^\circ K) - E_g(20^\circ K) \right]}{E(6^\circ K) - E_g(6^\circ K)}$$

[7\) Corrected in Ref. \[6\] in Bibliography](#)

J A Weber, P Böni, H Ceeh, M Leitner, and Ch Hugenschmidt. First 2d-acar measurements on cu with the new spectrometer at tum. Journal of Physics: Conference Series, 443(1):012092, 2013.