

Errata for *Replica calculations for the SK model*

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- Eq. (13) in page 2:
The first item on the exponential should be $-\frac{1}{2}\beta J_0 M m_\alpha^2$.
- The line below Eq. (25) in page 4:
It might be *Now as $n \rightarrow 0$, ...*
- Eq. (37) in page 5:
The factor $\frac{1}{n}$ is missing in the right-hand side of the equal sign.
- Eq. (47) in page 6:
The sign of integration in the third term is missing.
Besides, in Eq. (47), it seems that the equivalence relation

$$\frac{d}{dx} \tanh(\beta x) \xrightarrow{\beta \rightarrow \infty} 2\delta(x)$$

is used to obtain the third term from the second term. However, I don't know if this limit is correct, or if it's done in some other way.

- Eq. (51) in page 6:
I believe that the result of the last integral should not use the approximately equal sign, omitting the coefficient $1/\sqrt{2\pi}$, since it is important for the value of the ground state entropy (although this does not change the sign).
- The equation at the bottom of page 10:
The second term $-\frac{n}{2}\beta^2 J^2 q_0$ on the exponential in the second line and the first item $-\frac{1}{2}\beta^2 J^2 q_0$ in the third line should be q_1 instead of q_0 .
- Eq. (74) ~ (86) in page 11:
The item $\beta J \sqrt{q_0} u$ on the exponential of all these equations should be corrected to $J \sqrt{q_0} u$ without an additional β .
- Eq. (75) in page 11:
The variable S^α is missing on the exponential.
- Eq. (96) in page 12:
The sign before the last term $\sum_i \lambda_i m_i$ should be $+$ rather than $-$.
- The equation at the bottom of page 12:
The third and fifth lines are repeated with the second and fourth lines respectively. I guess you want to express

$$= \sum_i \lambda_i m_i - T \log \prod_i \sum_{\mathbf{s}} \exp(\beta \lambda_i S_i)$$

on the third line.

- Eq. (102) and (103) in page 13:
A square bracket should be placed after the second summation sign to indicate the summation of all subsequent terms, to avoid misunderstandings.