

Errata thesis Cord Axel Müller

Bayreuth, December 9, 2003

Aside from obvious typing errors, the following mistakes of the first, printed version of August 2001 should be noted:

- Eq (1.88) should contain a minus sign:

$$\langle U(t) \rangle = -\frac{1}{2\pi i} \dots$$

- Eq. (2.8) of sec. 2.1.1 should read

$$T_{\text{dir}} = \frac{1}{g_{\omega}^2} \bar{\boldsymbol{\varepsilon}}' \cdot \mathbf{t}_2(m_2, m_2'; \omega) \cdot \mathbf{g}_i(\mathbf{r}_{12}; \omega) \cdot \mathbf{t}_1(m_1, m_1'; \omega) \cdot \boldsymbol{\varepsilon} e^{i[\mathbf{k} \cdot \mathbf{r}_1 - \mathbf{k}' \cdot \mathbf{r}_2]}$$

- The section 2.2.1. gives an erroneous description of the Bethe-Salpether equation. The correct, state-of-the-art version can be found in the article C.A. Müller and Ch. Miniatura, J. Phys. A: Math. Gen. **35**, 10163 (2002), physics/0205029. Note that the conclusions for the CBS factors of the thesis remain correct because the *ad hoc* definitions (2.89) and (2.90) of the CBS-configuration average reinclude the external propagators and therefore repair the initial mistake.
- In eq. (2.122), a dividing factor $\sqrt{1 - \mu^2}$ has been forgotten. The following eq. (2.123) is correct. (Note that the same mistake, of no influence on the graphs or conclusions, occurs in the published article C.A. Müller *et al.*, Phys. Rev. A **64**, 053804 (2001), quant-ph/0107030).
- In section 3.1.3., end of paragraph “Partie antisymétrique”, the remaining two-fold degeneracy of the tranverse propagator must be attributed to one of the eigenfunctions, $g_{12}(p)$, as evident from a comparison with the eigenvalues derived by Ozrin, Waves Rand. Media **2**, 141 (1992).
- In eq. (3.135) and following, the 2×2 -coupling matrix has been wrongly inverted. Small changes in the expressions for the summed ladder and crossed propagators ensue. Again, the corrected expressions are contained in C.A. Müller and Ch. Miniatura, J. Phys. A: Math. Gen **35** 10163 (2002), physics/0205029 as well in the corrected online version of the thesis.

None of these errors affect the results or conclusions of the thesis. Since this continues to be work in progress, please let me know whenever you detect an inaccuracy — Thanks and good reading!