# Two electrons in a homogeneous magnetic field: particular analytical solutions



1994 J. Phys. A: Math. Gen. 27 4723

(http://iopscience.iop.org/0305-4470/27/13/047)

J. Phys. A: Math. Gen. **27** (1994) 4723–4724. Printed in the UK

# Corrigenda

## A generalization of the construction of the class operator

Orłowski A and Strasburger A 1994 *J. Phys. A: Math. Gen.* **27** 167–75

1. The following two inaccuracies in the text should be corrected. The remaining results and conclusions are not influenced by those changes.
(a) The set $\Lambda_e$ appearing on page 172 should be defined as

$$\Lambda_e = \left\{ (t_1, t_2, t_3) \in \mathbf{R}^3 \mid \sqrt{t_1^2 + t_2^2 + t_3^2} = 2k\pi, k \in \mathbf{Z} \right\}.$$

(b) On page 172, the paragraph beginning with 'For the case of the character $\chi_s \ldots$' and ending with the displayed formula for $\chi_s(g(\theta))$ should be replaced by the following text:

For the case of the irreducible representation $(T_s, V_s)$ of $SU(2)$ of dimension $2s+1$ with an integer $s$, we have (recalling the expression for the character $\chi_s(g)$, $g = g(\phi, \theta, \varphi)$, in terms of the Euler parameters $\phi, \theta, \varphi$; see [10], chapter III, §7)

$$\frac{1}{4\pi} \int_{-2\pi}^{2\pi} \chi_s(\phi, \theta, \varphi) \mathrm{d}\varphi = P_s(\cos\theta)$$

where $P_s$ is the Legendre polynomial of degree $s$. Thus we have

$$\begin{aligned} T_j(\overline{\chi_s}; g(\psi)) &= \frac{1}{16\pi^2} \int_0^{2\pi} \int_0^{\pi} \int_{-2\pi}^{2\pi} \overline{\chi_s}(g(\phi, \theta, \varphi)) T_j \exp\left( \mathrm{i}\frac{\psi}{2} \boldsymbol{n}(\theta, \phi) \cdot \boldsymbol{\sigma} \right) \sin\theta \, \mathrm{d}\varphi \, \mathrm{d}\theta \, \mathrm{d}\phi \\ &= \frac{1}{4\pi} \int_0^{2\pi} \int_0^{\pi} P_s(\cos\theta) T_j \exp\left( \mathrm{i}\frac{\psi}{2} \boldsymbol{n}(\theta, \phi) \cdot \boldsymbol{\sigma} \right) \sin\theta \, \mathrm{d}\theta \, \mathrm{d}\phi. \end{aligned} \qquad (13)$$

2. The final version of the paper was written when the first named author (AO) was at Arbeitsgruppe 'Nichtklassische Strahlung' der Max–Planck–Gesellschaft an der Humboldt–Universität zu Berlin.

## Two electrons in a homogeneous magnetic field: particular analytical solutions

Taut M 1994 *J. Phys. A: Math. Gen.* **27** 1045–55

In the caption to figure 2, '$1/\tilde{\omega}_r = 2904.617$, and 29 312.4' (i.e. two numbers) should read '$1/\tilde{\omega}_r = 2, 904.617$, and 29 312.4' (i.e. three numbers).

Also, the caption to table 1 contains a misprint, and a portion of the data in the table (from $n = 10$, $N_r = 0$ to $n = 14$, $N_r = 0$) was omitted. The correct table reads:

**Table 1.** All solutions for the effective oscillator frequencies $\tilde{\omega}_r$ and the corresponding eigenvalues $(\varepsilon_r - \frac{1}{2}m\omega_L)$ for $n = 2$–15 and $m = 0$. $N_r$ is the number of nodes of $u(r)$.

| $n$ | $1/\tilde{\omega}_r$ | $\varepsilon_r$ | $N_r$ |
|---|---|---|---|
| 2 | 0.200 000E+01 | 0.100 000E+01 | 0 |
| 3 | 0.120 000E+02 | 0.250 000E+00 | 0 |
| 4 | 0.370 880E+02 | 0.107 852E+00 | 0 |
| | 0.291 199E+01 | 0.137 363E+01 | 1 |
| 5 | 0.844 674E+02 | 0.591 944E−01 | 0 |
| | 0.155 326E+02 | 0.321 903E+00 | 1 |
| 6 | 0.161 253E+03 | 0.372 085E−01 | 0 |
| | 0.450 281E+02 | 0.133 250E+00 | 1 |
| | 0.371 853E+01 | 0.161 354E+01 | 2 |
| 7 | 0.274 552E+03 | 0.254 961E−01 | 0 |
| | 0.987 004E+02 | 0.709 217E−01 | 1 |
| | 0.187 477E+02 | 0.373 379E+00 | 2 |
| 8 | 0.431 472E+03 | 0.185 412E−01 | 0 |
| | 0.183 686E+03 | 0.435 527E−01 | 1 |
| | 0.523 811E+02 | 0.152 727E+00 | 2 |
| | 0.446 155E+01 | 0.179 310E+01 | 3 |
| 9 | 0.639 123E+03 | 0.140 818E−01 | 0 |
| | 0.307 090E+03 | 0.293 074E−01 | 1 |
| | 0.112 038E+03 | 0.803 299E−01 | 2 |
| | 0.217 493E+02 | 0.413 807E+00 | 3 |
| 10 | 0.904 617E+03 | 0.110 544E−01 | 0 |
| | 0.476 020E+03 | 0.210 075E−01 | 1 |
| | 0.204 893E+03 | 0.488 059E−01 | 2 |
| | 0.593 094E+02 | 0.168 607E+00 | 3 |
| | 0.516 065E+01 | 0.193 774E+01 | 4 |
| 11 | 0.123 506E+04 | 0.890 643E−02 | 0 |
| | 0.697 587E+03 | 0.157 686E−01 | 1 |
| | 0.338 061E+03 | 0.325 385E−01 | 2 |
| | 0.124 695E+03 | 0.882 155E−01 | 3 |
| | 0.245 940E+02 | 0.447 263E+00 | 4 |
| 12 | 0.163 757E+04 | 0.732 791E−02 | 0 |
| | 0.978 901E+03 | 0.122 586E−01 | 1 |
| | 0.518 652E+03 | 0.231 369E−01 | 2 |
| | 0.225 134E+03 | 0.533 016E−01 | 3 |
| | 0.659 118E+02 | 0.182 062E−00 | 4 |
| | 0.582 685E+01 | 0.205 943E+01 | 5 |
| 13 | 0.211 926E+04 | 0.613 422E−02 | 0 |
| | 0.132 707E+04 | 0.979 599E−02 | 1 |
| | 0.753 779E+03 | 0.172 464E−01 | 2 |
| | 0.367 760E+03 | 0.353 491E−01 | 3 |
| | 0.136 810E+03 | 0.950 220E−01 | 4 |
| | 0.273 169E+02 | 0.475 896E+00 | 5 |
| 14 | 0.268 723E+04 | 0.520 982E−02 | 0 |
| | 0.174 921E+04 | 0.800 359E−02 | 1 |
| | 0.105 055E+04 | 0.133 263E−01 | 2 |
| | 0.559 693E+03 | 0.250 137E−01 | 3 |
| | 0.244 586E+03 | 0.572 396E−01 | 4 |
| | 0.722 529E+02 | 0.193 764E+00 | 5 |
| | 0.646 710E+01 | 0.216 480E+01 | 6 |
| 15 | 0.334 860E+04 | 0.447 948E−02 | 0 |
| | 0.225 244E+04 | 0.665 946E−02 | 1 |
| | 0.141 609E+04 | 0.105 926E−01 | 2 |
| | 0.808 051E+03 | 0.185 632E−01 | 3 |
| | 0.396 399E+03 | 0.378 406E−01 | 4 |
| | 0.148 483E+03 | 0.101 022E+00 | 5 |
| | 0.299 411E+02 | 0.500 983E+00 | 6 |