Young operators in standard orthogonal form

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Corrigenda

Thermal conductivity in a partially degenerate electron plasma
Gouedard C 1977 *J. Phys. A: Math. Gen.* **10** L143–5

The second term inside the large parentheses of equation (1) should read

$$\frac{4\alpha r_{\mathrm{s}}^{\mathrm{i}}}{\pi}\frac{k_{\mathrm{F}}^{\mathrm{i}2}}{4\pi e^2}Z^2 g^{\mathrm{i}}(Q_{\mathrm{i}}, \nu_{\mathrm{i}}).$$

The equation at the top of page L145 should be numbered (6) and the last condition defining $\lambda\!\!\!^-$ should read

$$\lambda\!\!\!^- = \frac{\hbar}{2(m\mathscr{E}_{\mathrm{F}})^{1/2}}.$$

Young operators in standard orthogonal form
El-Sharkaway N G and Jahn H A 1977 *J. Phys. A: Math. Gen.* **10** 659–76

The representation [2 1] may be obtained by putting $n=3$ in either $[n-1, 1]$ or in $[2\ 1^{n-2}]$, but the bra and ket vectors obtained for [2 1] by these two ways differ. It is clearly incorrect to have two different expressions represented by the same symbol. We propose to correct this fault by using *round* bracket bra and ket symbols for those obtained from $[2\ 1^{n-2}]$, retaining *angular* bracket bra and ket symbols for those obtained from $[n-1, 1]$. Thus we write

$$\left\langle 3_3^* \right| = \left(\begin{matrix}1 & 3\\ 2 & \end{matrix}\right| = (4/3)A_{12}S_{13}A_{12} = \left|\begin{matrix}1 & 3\\ 2 & \end{matrix}\right) = \left| 3_3^* \right\rangle,$$

$$\left\langle 2_3^* \right| = \left(\begin{matrix}1 & 2\\ 3 & \end{matrix}\right| = (4/3)^{1/2}S_{12}A_{13}, \qquad \left| 2_3^* \right\rangle = \left|\begin{matrix}1 & 2\\ 3 & \end{matrix}\right) = (4/3)^{1/2}A_{13}S_{12},$$

$$\left\langle 3_3 \right| = \left\langle\begin{matrix}1 & 2\\ 3 & \end{matrix}\right| = (4/3)S_{12}A_{13}S_{12} = \left|\begin{matrix}1 & 2\\ 3 & \end{matrix}\right\rangle = \left| 3_3 \right\rangle,$$

$$\left\langle 2_3 \right| = \left\langle\begin{matrix}1 & 3\\ 2 & \end{matrix}\right| = (4/3)^{1/2}A_{12}S_{13}, \qquad \left| 2_3 \right\rangle = \left|\begin{matrix}1 & 3\\ 2 & \end{matrix}\right\rangle = (4/3)^{1/2}S_{13}A_{12}.$$

In forming Young operators both brackets must be of the same type. Thus we have

$$o_{33}^3 = \left(\begin{matrix}1 & 2\\ 3 & \end{matrix}\middle|\begin{matrix}1 & 2\\ 3 & \end{matrix}\right) = (4/3)S_{12}A_{13}S_{12} = \left\langle\begin{matrix}1 & 2\\ 3 & \end{matrix}\middle|\begin{matrix}1 & 2\\ 3 & \end{matrix}\right\rangle,$$

$$o_{22}^3 = \left\langle\begin{matrix}1 & 3\\ 2 & \end{matrix}\middle|\begin{matrix}1 & 3\\ 2 & \end{matrix}\right\rangle = (4/3)A_{12}S_{13}A_{12} = \left(\begin{matrix}1 & 3\\ 2 & \end{matrix}\middle|\begin{matrix}1 & 3\\ 2 & \end{matrix}\right),$$

$$o^3_{23} = \left\langle \begin{matrix}1 & 3\\ 2 & \end{matrix} \right| P_{23} \left| \begin{matrix}1 & 2\\ 3 & \end{matrix} \right\rangle = (4/3)^{1/2} A_{12} S_{13} P_{23} = \left(\begin{matrix}1 & 3\\ 2 & \end{matrix} \right| P_{23} \left| \begin{matrix}1 & 2\\ 3 & \end{matrix} \right),$$

$$o^3_{32} = \left\langle \begin{matrix}1 & 2\\ 3 & \end{matrix} \right| P_{23} \left| \begin{matrix}1 & 3\\ 2 & \end{matrix} \right\rangle = (4/3)^{1/2} S_{12} A_{13} P_{23} = \left(\begin{matrix}1 & 2\\ 3 & \end{matrix} \right| P_{23} \left| \begin{matrix}1 & 3\\ 2 & \end{matrix} \right),$$

where use has been made, ,where needed, of the reduction formulae. In table 1 it should read

$$o^n_{ab} = \left(\begin{matrix}1 \dots \dot{a} \dots n\\ a \end{matrix} \right| o \left| \begin{matrix}1 \dots \dot{b} \dots n\\ b \end{matrix} \right)$$

and in equation (10.10) read $(a-1)$.