ERRATUM TO "SOME REMARKS ON THE UNROLLED QUANTUM GROUP OF $\mathfrak{sl}(2)$"

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The following corrections should be made to the formulas in the published version of "Some remarks on the unrolled quantum group of $\mathfrak{sl}(2)$." We apologize to the readers for the inconvenience.

- Formula (30) in page 3249 should be replaced by :

$$\Phi_{S_i,P_j} = (-1)^i \frac{\{(i+1)(j+1)\}}{\{j+1\}} \operatorname{Id}_{P_j} + (-1)^i \{1\}^2 \frac{i\{(i+2)(j+1)\} - (i+2)\{i(j+1)\}}{\{j+1\}^3} x_j,$$

- Formula (31) in page 3249 should be replaced by :

$$\Phi_{V_0,P_j} = (-1)^{r+j} \frac{2r\{1\}^2}{\{j+1\}^2} x_j, \quad \Phi_{P_i,P_j} = \frac{(-1)^i 2r\{1\}^2}{\{j+1\}^2} \Big(q^{(i+1)(j+1)} + q^{-(i+1)(j+1)} \Big) x_j.$$

- Page 3250 line -15, replace the formula by :

$$\Phi_{S_i,P_j} = \frac{(-1)^i}{\{j+1\}} \left(\{(i+1)(j+1)\} \operatorname{Id}_{P_j} + \frac{\{1\}^2 x_j}{\{j+1\}^2} \left(i\{(i+2)(j+1)\} - (i+2)\{i(j+1)\} \right) \right).$$

- Page 3250, line -13, replace the formula by :

$$\Phi_{V_0,P_j} = (-1)^{r+j} \frac{2r\{1\}^2}{\{j+1\}^2} x_j.$$

- Page 3250, line -9, replace the computation by :

$$\begin{aligned} \Phi_{P_i,P_j} &= \Phi_{V_0,P_j}(\Phi_{S_{r-i-1},P_j} - \Phi_{S_{r-i-3},P_j}) \\ &= \frac{-(-1)^{i+j} 2r\{1\}^2}{\{j+1\}^3} (\{(r-i)(j+1)\} - \{(r-i-2)(j+1)\}) x_j \\ &= \frac{-(-1)^{i+j} 2r\{1\}^2}{\{j+1\}^2} \Big(q^{(r-i-1)(j+1)} + q^{(-r+i+1)(j+1)} \Big) x_j \\ &= \frac{(-1)^i 2r\{1\}^2}{\{j+1\}^2} \Big(q^{(i+1)(j+1)} + q^{-(i+1)(j+1)} \Big) x_j. \end{aligned}$$

- Page 3250 line -5 replace the formula by :

$$\mathtt{t}_P(\Phi_{V_0,P}) = \mathtt{t}_{V_0}(\Phi_{P,V_0}) = (-1)^{r-1} \langle \Phi_{P,V_0} \rangle$$

.

- Page 3250 line -3 replace the computation by

$$\begin{aligned} \mathtt{t}_P(\Phi_{V_0,P}) &= \mathtt{t}_P(\operatorname{ptr}_R(c_{P,V_0} c_{V_0,P})) = \mathtt{t}_{P\otimes V_0}(c_{V_0,P} c_{P,V_0}) = \mathtt{t}_{V_0\otimes P}(c_{P,V_0} c_{V_0,P}) \\ &= \mathtt{t}_{V_0}(\operatorname{ptr}_R(c_{P,V_0} c_{V_0,P})) = \mathtt{t}_{V_0}(\Phi_{P,V_0}) = (-1)^{r-1} \langle \Phi_{P,V_0} \rangle \end{aligned}$$

- Page 3251 line 5, replace $\mathtt{d}(V_0) = (-1)^{r-1} r$ by $\mathtt{d}(V_0) = (-1)^{r-1}$

- Page 3251 line 9, replace the formula with

$$\mathsf{d}(P_j) = \mathsf{t}_{P_j}(\mathrm{Id}_{P_j}) = (-1)^{j+1}(q^{j+1} + q^{-j-1}) \quad \text{and} \quad \mathsf{t}_{P_j}(x_j) = (-1)^{j+1}\frac{\{j+1\}^2}{\{1\}^2}.$$

- Page 3251 line 18, replace formula with :

$$(-1)^{r+j}2r\mathsf{t}_{P_j}(x_j)\frac{\{1\}^2}{\{j+1\}^2} = (-1)^{r-1}r\frac{2}{\mathsf{d}(V_0)}\mathsf{t}_{V_0}(\mathrm{Id}_{V_0})$$

- Page 3251 line 21 replace the formula with :

$$\theta_{P_j} = (-1)^j q^{\frac{j^2+2j}{2}}(1 - (r-j-1)\frac{\{1\}^2}{\{j+1\}}x_j).$$

- Page 3251 line -4, replace formula with:

$$\mathsf{t}(\theta_{P_j}) = -q^{\frac{j^2+2j}{2}}(q^{j+1} + q^{-j-1} + \lambda\frac{\{j+1\}^2}{\{1\}^2})$$

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