# Errata to "Representations of finite groups of Lie type", LMS Student texts no. 95

December 7, 2022

## page 95

Proposition 6.1.12 is wrong (thanks to Jay Taylor for noticing that). It should read

**Proposition 6.1.12** *If $(\mathbf{L}_I, \Lambda)$ is a cuspidal pair where $\Lambda$ is a unipotent character (see Definition 11.3.4), then $W_I$ is normalised by $w_J$ for any $F$-stable $J \subset S$ containing $I$, where $w_J$ is the longest element of the Coxeter group $W_J$; $W_{\mathbf{G}^F}(\mathbf{L}_I)$ is a Coxeter group with generating simple reflections the elements $w_J w_I$ where $J \supset I$ and $J - I$ is a single orbit under $F$.*

The proof actually proves this corrected statement.

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The function $R_{(1,\varepsilon)}$ is equal to $\eta q^2 \mathcal{Y}_{(G_2(a_1),\varepsilon)}$ where $\eta = \pm 1$ is equal to $q \pmod 3$. Consequently table 14.2 is wrong.

The values of unipotent characters of $G_2$ on unipotent classes ($p \neq 2, 3$):

| | 1 | $A_1$ | $\tilde{A}_1$ | $G_2(a_1)_3$ | $G_2(a_1)_2$ | $G_2(a_1)$ | $G_2$ |
|---|---|---|---|---|---|---|---|
| **1** | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| St | $q^6$ | . | . | . | . | . | . |
| $\sigma$ | $\frac{q}{3}\Phi_3\Phi_6$ | $-\frac{q}{3}\Phi_1\Phi_2$ | $q$ | $\frac{q}{3}(\eta q+5)$ | $-\frac{q}{3}(\eta q-1)$ | $\frac{q}{3}(\eta q-1)$ | . |
| $\tau$ | $\frac{q}{3}\Phi_3\Phi_6$ | $\frac{q}{3}(2q^2+1)$ | . | $\frac{q}{3}(\eta q-1)$ | $-\frac{q}{3}(\eta q-1)$ | $\frac{q}{3}(\eta q+2)$ | . |
| $\rho$ | $\frac{q}{6}\Phi_2^2\Phi_3$ | $\frac{q}{6}(2q+1)\Phi_2$ | $\frac{q}{2}\Phi_2$ | $\frac{q}{6}(\eta q+5)$ | $-\frac{q}{6}(\eta q-1)$ | $\frac{q}{6}(\eta q-1)$ | . |
| $\rho'$ | $\frac{q}{2}\Phi_2^2\Phi_6$ | $\frac{q}{2}\Phi_2$ | $\frac{q}{2}\Phi_2$ | $-\frac{q}{2}(\eta q-1)$ | $\frac{q}{2}(\eta q+1)$ | $-\frac{q}{2}(\eta q-1)$ | . |
| $\gamma_{[-1]}$ | $\frac{q}{2}\Phi_1^2\Phi_3$ | $-\frac{q}{2}\Phi_1$ | $-\frac{q}{2}\Phi_1$ | $-\frac{q}{2}(\eta q-1)$ | $\frac{q}{2}(\eta q+1)$ | $-\frac{q}{2}(\eta q-1)$ | . |
| $\gamma_{[1]}$ | $\frac{q}{6}q\Phi_1^2\Phi_6$ | $\frac{q}{6}(2q-1)\Phi_1$ | $-\frac{q}{2}\Phi_1$ | $\frac{q}{6}(\eta q+5)$ | $-\frac{q}{6}(\eta q-1)$ | $\frac{q}{6}(\eta q-1)$ | . |
| $\gamma_{[\zeta_3]}$ | $\frac{q}{3}\Phi_1^2\Phi_2^2$ | $-\frac{q}{3}\Phi_1\Phi_2$ | . | $\frac{q}{3}(\eta q-1)$ | $-\frac{q}{3}(\eta q-1)$ | $\frac{q}{3}(\eta q+2)$ | . |
| $\gamma_{[\zeta_3^2]}$ | $\frac{q}{3}\Phi_1^2\Phi_2^2$ | $-\frac{q}{3}\Phi_1\Phi_2$ | . | $\frac{q}{3}(\eta q-1)$ | $-\frac{q}{3}(\eta q-1)$ | $\frac{q}{3}(\eta q+2)$ | . |