Corrigendum

Volume 114, Number 1 (1988), in the article "Primitive Ideals and Nilpotent Orbits in Type $G_2$," by T. Levasseur and S. P. Smith, pages 81–105:

It was falsely claimed in 2.6 that $\pi(\mathcal{N}_1) \subseteq \mathcal{N}_2$. We are grateful to P. Torasso for bringing this error to our attention. He pointed out that $X := X_{\eta_1 - \eta_2} + X_{-\eta_3}$ is in $\mathcal{N}_1$ (being conjugate to $X_{\eta_1 + \eta_3} + X_{\eta_2}$), but that $\pi(X) = cX_{\eta_3} + dX_{-\eta_1}$ ($0 \neq c, d \in \mathbb{C}$) is not nilpotent in $g_2$ (for the same reason that $\{a, 0, 0\}$ is not nilpotent in $sl(2)$).

The "fact" that $\pi(\mathcal{N}_1) \subseteq \mathcal{N}_2$ is only used in the proof of Proposition 2.6. Nevertheless, Proposition 2.6 is true as stated, and a proof is obtained by replacing the first sentence of the old "proof" by the following three sentences.

"Certainly $X_{\eta_1 - \eta_2} \in O_{\min}$; whence $G_2 \cdot X_{\eta_1 - \eta_2} \subseteq O_{\min}$. But $\pi(G_2 \cdot X_{\eta_1 - \eta_2}) = G_2 \cdot \pi(X_{\eta_1 - \eta_2}) = G_2 \cdot X_{\eta_3} = O_8$, so $\dim(G_2 \cdot X_{\eta_1 - \eta_2}) \geq 8 = \dim O_{\min}$. Therefore $G_2 \cdot X_{\eta_1 - \eta_2} \subseteq O_{\min}$, and this forces $\pi(O_{\min}) = \pi(G_2 \cdot X_{\eta_1 - \eta_2}) \subseteq \pi(G_2 \cdot X_{\eta_1 - \eta_2} - O_{\min})$."

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