Errata corrige

"On the arithmetic theory of q-difference equations"
Invent. Math. 150, 517–578 (2002)

Lucia Di Vizio *

20th February 2005

p. 529, l. 17: $t^{d(1-\lambda_i)}\begin{pmatrix}\alpha_i & 0 & 0\dots & 0 & \\ 1 & \alpha_i & 0 & \dots & 0\\ 0 & \ddots & \ddots & \ddots & \vdots\\ \vdots & \ddots & \ddots & \ddots & 0\\ 0 & \dots & 0 & 1 & \alpha_i\end{pmatrix}$,

p. 552, l. 16: "$B_k \in Gl_\mu(L)$ non nilpotent" $\longrightarrow$ "$B_k \in M_{\mu\times\mu}(L)$ non nilpotent"

p. 552, l. 19: (Thanks to A. Roescheisen) The last sentence of the proof is false. It should be replaced by the following:

> Remark that there exist $F_{for}(t) \in Gl_\mu(L[\![x]\!])$ and $F_{rat}(t) \in Gl_\mu(L(t))$ such that $F(t) = F_{for}(t)F_{rat}(t)$. Consider the basis $\underline{f}'$ of $\mathcal{M}_{L(t)}$ defined by $\underline{e} = \underline{f}'F_{rat}(t)$ (*i.e.* $\underline{f} = \underline{f}'F_{for}(t)$). Then $\Phi_{\tilde{q}}\underline{f}' = \underline{f}'B'(t)$, with $B'(t) = \left(\frac{B'_k}{t^k} + h.o.t.\right)$ and
>
> $$B'_k = \left(F_{for}(0)\right)^{-1} B_k F_{for}(0)$$
>
> non nilpotent matrix with coefficient in L. It follows from the first part of the proof that this is in contradiction with the fact that $\mathcal{M}_{L(t)}$ has unipotent reduction modulo almost any prime w of L that devides a prime in Σ_{nilp}.

p. 571, l. -7: $(\mathcal{H}_{a,b,c})$ $$\varphi_q^2 y(x) - \frac{(a+b)x-(1-cq)}{abx-cq}\varphi_q y(x) + \frac{x-1}{abx-cq}y(x) = 0,$$

*École Normale Supérieure, 45 rue d'Ulm, 75005 Paris, France. e-mail: lucia.di.vizio@ens.fr