

Corrections to my paper “Endomorphisms of Weyl algebra and p -curvatures”.

There are several errors in sign. Here is a short note on corrections on them. The corrected part is marked up in **red**. The author hopes this note helps readers’ understanding of the paper.

The origin of the error is the coordinate description of $\nabla^{(0)}$ (Lemma 3.1). Namely, the formula (3.1) should be

$$(3.1) \quad \left. \begin{aligned} \nabla_{\partial/\partial T_i}^{(0)} &= \partial/\partial T_i - \text{ad}(\nu_i), \\ \nabla_{\partial/\partial U_i}^{(0)} &= \partial/\partial U_i + \text{ad}(\mu_i). \end{aligned} \right\} \quad (i = 1, 2, \dots, n).$$

Accordingly, the definition of F right after (3.1) should be

$$\nabla = d + dF, \quad F = - \left(\sum_{i=1}^n T_i \nu_i - U_i \mu_i \right).$$

The definition of $\nabla^{(1)}$ should be,

$$(3.6) \quad \nabla^{(1)} = \nabla + \sum_{i=1}^n T_i dU_i (= d + dF + \sum_{i=1}^n T_i dU_i).$$

In other words,

$$\nabla_{\frac{\partial}{\partial T_i}}^{(1)} = \frac{\partial}{\partial T_i} - \nu_i, \quad \nabla_{\frac{\partial}{\partial U_i}}^{(1)} = \frac{\partial}{\partial U_i} + \mu_i + T_i.$$

The change affects the sign proof of Proposition 3.2 should be as follows.

$$(3.7) \quad \begin{aligned} (\text{curv}_p \nabla^{(1)})(D) &= (\nabla_D^{(1)})^p - \nabla_{D^p}^{(1)} = + \left\langle \sum_{i=1}^n T_i dU_i, D \right\rangle^p \\ &+ \left\langle \sum_{i=1}^n \overline{T}_i d\overline{U}_i, D \right\rangle^p = + \left\langle \sum_{i=1}^n T_i dU_i, D \right\rangle^p + D^{p-1} \langle \omega^{(1)}, D \rangle + \langle \omega^{(1)}, D \rangle^p \end{aligned}$$

Thus the equation (3.4) in Proposition 3.2 should be as follows.

$$(3.4) \quad \left. \begin{aligned} \omega_{T_i}^p + (\partial/\partial T_i)^{p-1} (\omega_{T_i} + \sum_{j=1}^n \overline{T}_j \frac{\partial \overline{U}_j}{\partial T_i}) &= 0 \\ \omega_{U_i}^p + (\partial/\partial U_i)^{p-1} (\omega_{U_i} + \sum_{j=1}^n \overline{T}_j \frac{\partial \overline{U}_j}{\partial U_i}) &= 0 \end{aligned} \right\} \quad (i = 1, 2, \dots, n)$$