ANNALES SCIENTIFIQUES DE L'É.N.S.

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Erratum : "$C^{-\infty}$-Whittaker vectors for complex semisimple Lie groups, wave front sets, and Goldie rank polynomial representations"

Annales scientifiques de l'É.N.S. 4e série, tome 23, nº 4 (1990), p. 668 (supplément)

<http://www.numdam.org/item?id=ASENS_1990_4_23_4_S668_0>

Ann. scient. Éc. Norm. Sup.,
4e série, t. 23, 1990, p. 668.

ERRATUM

$C^{-\infty}$-Whittaker vectors for complex semisimple Lie groups, wave front sets, and Goldie rank polynomial representations

Hisayosi MATUMOTO (1)

Ann. scient. Éc. Norm. Sup., 4e série, t. 23, 1990, p. 311 à 367.

In p355 line 5, I claimed the existence of a filtration $1 \otimes S_w = L_q \subseteq L_{q-1} \subseteq \cdots \subseteq L_0 = E_p$ such that $\bar{\mathfrak{n}} L_j \subseteq L_{j+1}$. However, this statement is incorrect. A correct statement is : there exists a filtration $1 \otimes S_w = L_q \subseteq L_{q-1} \subseteq \cdots \subseteq L_0 = E_p$ such that L_j / L_{j+1} $(0 \leq j < q)$ is equivalent to a quotient of S_w. Let B be the smashed product $\mathbf{C}[y,x] \sharp U(\bar{\mathfrak{n}})$ defined in 4.4. Then we can easily see the above filtration can be that of B-modules and L_j/L_{j+1} is equivalent to a quotient B-module of S_w. So, Theorem 4.1.1 is reduced to Lemma 4.3.16 and the following refinement of Lemma 4.3.17.

Lemma

Let ψ be a permissible character on $\bar{\mathfrak{n}}$. Let V be a B-submodule of $\mathcal{S}(\bar{U}_m/\bar{U}_m^w)'$. Then we have

$$H^p(\bar{\mathfrak{n}}, (\mathcal{S}(\bar{U}_m/\bar{U}_m^w)'/V) \otimes \mathbf{C}_{-\psi}) = 0$$

for all $p \in \mathbf{N}$ and $w \in W_m^S - \{e\}$.

The proof of the above lemma is just the same as that of Lemma 4.3.17.

At p361 line 24, in order to apply Nullstellensatz, we should regard y_0 as a complex vector. It makes sense, since $\psi' = \mathrm{Ad}(e(y_0,0)^{-1})\psi$ is permisible.

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