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

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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., 4^e 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 $\bar{n}L_j \subseteq L_{j+1}$. 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 $C[y, x] \# U(\bar{n})$ 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{n} . Let V be a B -submodule of $S(\bar{U}_m/\bar{U}_m^w)'$. Then we have

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

for all $p \in \mathbb{N}$ 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 $\psi' = \text{Ad}(e(y_0, 0)^{-1})\psi$ is permissible.

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