ERRATUM TO "ALMOST UNRAMIFIED AUTOMORPHIC REPRESENTATIONS FOR SPLIT GROUPS OVER $\mathbf{F}_q(t)$"

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I thank Chris Jantzen for bringing to my notice an error in the statement of [1, Theorem 9] and showing me the necessary correction. The error arises due to a missing sign factor in the statement of Proposition 13 in [2], on which the proof was based. As a consequence, the statement of Theorem 10 in [1] also needs to be corrected (see below).

We use the notation of [1]. For an element $u \in q^{\mathbf{Z}}$ set

$$\mathrm{sgn}(u) = (-1)^{\log_q u}.$$

Let ϵ be the character of $T(F)$ defined by $\epsilon(t) = \mathrm{sgn}(\delta_B(t))$. Here δ_B denotes the modular function of $B(F)$. Note that ϵ is invariant under the action of the Weyl group W on T.

For an irreducible H-module (π, V), let $(r(\pi), U)$ denote the R-module that is obtained by taking the $T(O)$-invariants of the normalized Jacquet module of the irreducible representation of $G(F)$ whose I invariants form (π, V). Then,

$$r(\pi \circ \iota) \cong \epsilon r(\pi) \circ \mathrm{Int}(w_0),$$

where $\mathrm{Int}(w_0)$ is the involution on R induced by conjugation by w_0 on T. This is Proposition 13 of [2], except for the term ϵ, which is the correction. In particular, the term $\mathrm{sgn} \circ \rho^{-2}(t)$, where ρ denotes the positive square root of δ_B, is set to equal 1 in [2]. It is actually $\epsilon(t)$. With this correction, the original proof stands. As a result, it is necessary to correct Theorem 9 in [1]. The corrected version is:

Theorem 1. *Let $(\pi, V) \in \hat{H}$. Let $s \in \hat{T}/W$ correspond to the central character of (π, V). Then the central character of $(\pi \circ \iota, V)$ corresponds to ϵs.*

The proof remains unchanged, but must take into account the character ϵ. As a consequence, in Theorem 10, $s(\pi)$ should be replaced by $\epsilon s(\pi)$.

References

[1] Amritanshu Prasad. Almost unramified automorphic representations for split groups over $\mathbf{F}_q(t)$. *J. Algebra*, 262(1):253–261, 2003.

[2] François Rodier. Sur les représentations non ramifiées des groupes réductifs p-adiques; l'exemple de GSp(4). *Bull. Soc. Math. France*, 116(1):15–42, 1988.