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Addendum to "Hochschild Cohomology of skew group rings and invariants"

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The purpose of this addendum to [2] is twofold. First of all we want to remark that the proof of Theorem 2.9 proves in fact a more general result, which is the following.

Theorem: ([2], Theorem 2.9) *Let A be a k-algebra, G be a finite group acting on A and $A[G]$ the associated skew group algebra. Then G acts on the Hochschild cohomology k-algebra $HH^\bullet(A)$, and there is a ring monomorphism: $HH^\bullet(A) \hookrightarrow HH^\bullet(A[G])$.*

Consequently, we also can restate Proposition 3.5.

Proposition: ([2], Proposition 3.5) *Let G be a finite group and A be a G-graded k-algebra. Let $\widetilde{A}$ be the covering algebra defined by the grading. Then G acts on $HH^\bullet(\widetilde{A})$ and there is a ring monomorphism from $HH^\bullet(\widetilde{A})$ into $HH^\bullet(A)$*

Secondly, we want to observe that the statement in the last sentence of the introduction, related to Proposition 3.5, is not correct. This mistake came from a wrong interpretation of the results in [1].

References

[1] C. Cibils and M. J. Redondo: "Cartan-Leray spectral sequence for Galois coverings of categories", [to appear in Journal of Algebra].

[2] E. N. Marcos, R. Martínez-Villa, Ma. I. R. Martins: "Hochschild cohomology of skew group rings and invariants", *Central European Journal of Mathematics*, Vol. 2, (2004), pp. 177–191.

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