Group rings whose units form an FC-group: Corrigendum

By

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Prof. S. K. Sehgal has kindly pointed us that there was an oversight in a joint paper by himself and Prof. H. J. Zassenhaus, that we quote in [1].

Though this does not affect our proofs, Theorem 1 should now be stated as follows:

Theorem 1. *Let K be an infinite field of characteristic $p \geq 0$ and G a group which contains no elements of order p . Then $U(KG)$ is an FC-group if and only if one of the following conditions holds:*

- (i) G is abelian.
- (ii) G is a non-abelian FC-group whose torsion subgroup is finite, central.
- (iii) G is a non-abelian FC-group whose torsion subgroup T is central, of the form $T = \mathbb{Z}(q^\infty) \times B$, where $q \neq p$ is a prime rational integer, B a finite group and G' , the derived subgroup of G , is contained in $\mathbb{Z}(q^\infty)$. Moreover, if k_∞ is the field obtained by adjoining all q^i -th roots of unity to the prime subfield k of K then

$$(k_\infty \cap K, k) < \infty.$$

The corrected version of the result by Sehgal and Zassenhaus may be found in [3]. The reader will notice that the proofs hold also in the present case, except for that of Lemma 5.8, an analog of which follows easily from Lemma 4.3 of [2].

References

- [1] C. P. MILIES, Group rings whose units form an FC-group. Arch. Math. **30**, 380—384 (1978).
- [2] D. S. PASSMAN, The Algebraic Structure of Group Rings. New York 1977.
- [3] S. K. SEHغال, Topics in Group Rings. New York, Marcel Dekker, to appear.

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