Li, Yuanlin; **Sehgal, S. K.**; **Parmenter, M. M.**

On the normalizer property for integral group rings. (English) Zbl 0943.16012

Commun. Algebra 27, No. 9, 4217-4223 (1999).

The authors discuss the following property: A finite group G has the normalizer property if a unit u in the integral group ring $\mathbb{Z}G$ normalizes G if and only if there is an element $g \in G$ so that $u \cdot g$ is in the centre of $\mathbb{Z}G$. This question is of importance for the isomorphism problem for integral group rings.

The authors prove that if the intersection of all non-normal subgroups of G is not reduced to the identity, then G has the normalizer property. The class of these groups was discussed by *N. Blackburn* [J. Algebra 3, 30-37 (1966; Zbl 0141.02401)] and they are of rather restricted structure. The authors use essentially the above result of Blackburn. M. Hertweck gave examples for groups which do not have the normalizer property.

Reviewer: A.Zimmermann (Amiens)

MSC:

16U60	Units, groups of units (associative rings and algebras)
20C05	Group rings of finite groups and their modules (group-theoretic aspects)
16S34	Group rings
20D30	Series and lattices of subgroups

Keywords:

finite groups; normalizer property; units; integral group rings; centers; isomorphism problem

Full Text: DOI

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