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Parameters for dihedral blocks with two simple modules

Let k be an algebraically closed field of characteristic 2, let G be a finite group with dihedral Sylow 2-subgroups, and let B be the principal block of kG . Assume that there are precisely two isomorphism classes of simple B -modules. The description by Erdmann of the quiver and relations of the basic algebra of B is usually only given up to a certain parameter c which is either 0 or 1. In this talk, we will show that $c = 0$ if there exists a central extension \hat{G} of G by a group of order 2 such that the Sylow 2-subgroups of \hat{G} are generalized quaternion. As a special case, we obtain that $c = 0$ if $G = \mathrm{PGL}_2(\mathbb{F}_q)$ for some odd prime power q .