

GROUP GRADED HECKE INTERIOR ALGEBRAS

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Abstract. We prove that when we consider blocks of normal subgroups of finite groups G and G' , the $\mathcal{O}G$ -interior Hecke algebra introduced by L. Puig [4, Section 4] has a natural group graded structure, and its alternative descriptions yield isomorphisms of group graded $\mathcal{O}G$ -interior algebras.

MSC 2010. 20C20, 16W50.

Key words. G -interior algebras, group graded algebras, induction, endomorphism algebras.

REFERENCES

- [1] DADE, E.C., *Group graded rings and modules*, Math. Z., **174** (1980), 241–262.
- [2] MARCUS, A., *On equivalences between blocks of group algebras: reduction to the simple components*, J. Algebra, **184** (1996), 372–396.
- [3] MARCUS, A., *Representation Theory of Finite Groups Graded Algebras*, Nova Science Publishers, Commack, NY, 1999.
- [4] PUIG, L., *On the Local Structure of Morita and Rickard Equivalences between Brauer Blocks*. In: Progress in Mathematics, Vol. 178, Birkhauser, 1999.
- [5] THÉVENAZ, J., *G-Algebras and Modular Representation Theory*, Clarendon Press, Oxford, 1995.

Received September 19, 2014

Accepted November 1, 2014

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