Character Triple Conjecture for p-Solvable Groups

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In the representation theory of finite groups many so-called global-local conjectures have been reduced to questions on simple groups. This was first achieved by Issacs, Malle and Navarro in [IMN07] for the McKay Conjecture. The Clifford theoretic key in the proof of the reduction theorems can be described via character triples and relations among them. This idea culminated in [Spä17] where Späth introduced a new conjecture, called the Character Triple Conjecture (CTC), and showed that Dade's Projective Conjecture holds for every finite group if the CTC holds for all quasisimple groups. Nonetheless, this new conjecture is believed to hold for every finite group. We give new evidence to this fact by proving the Character Triple Conjecture for p-solvable groups.

References

[IMN07] I. M. Isaacs, G. Malle, and G. Navarro. A reduction theorem for the McKay conjecture. *Invent. Math.*, 170(1):33–101, 2007.

[Spä17] B. Späth. A reduction theorem for Dade's projective conjecture. *J. Eur. Math. Soc. (JEMS)*, 19(4):1071–1126, 2017.