Bounds of nilpotency class of powerful p-groups

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Powerful p-groups were introduced by Lubotzky and Mann in 1987 in [1]. A finite p-group G is called *powerful* if either p is odd and $[G, G] \subseteq G^p$ or $p = 2$ and $[G, G] \subseteq G^4$. We will discuss results that bound the nilpotency class of a powerful p-group in terms of the exponent of a quotient by a normal abelian subgroup.

References

[1] A. Lubotzky and A. Mann, Powerful p-groups. I. Finite groups, Journal of Algebra **105** (2) (1987), 484–505.