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Stephen D. Smith* (smiths@math.uic.edu), Department of Mathematics (m/c 249), U. Illinois-Chicago, 851 S. Morgan, Chicago, IL 60607-7045. *Representations on extraspecial groups applied to the classification of quasithin groups*. Preliminary report.

The joint work of Aschbacher and Smith leads to a new variant of classical large extraspecial 2-subgroup theory. Certain configurations lead to a quasisimple group L acting on an extraspecial 2-group Q , satisfying $\text{width}(Q) \leq 2(m_2(L) + 1)$. In the classical work of Timmesfeld et al, this was usually applied as a lower bound on the 2-rank of L . However in the quasithin context where L is already restricted, it can be regarded as an upper bound on $\text{width}(Q)$. This leads to a representation-theoretic determination of possible L and Q (Received July 21, 2000)