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Jiuya Wang* (jiuya.wang@uga.edu), Department of Mathematics, University of Georgia, Athens, GA 30602, and **Miao Gu**, **Yijia Liu**, **Zizai Cui** and **Max Fleischer**. *An induction theorem with positivity.*

The ℓ -torsion conjecture in arithmetic statistics states that the size of the ℓ -torsion subgroups of class groups are always bounded by $Disc(K)^\epsilon$. Recently, a decomposition of class groups into a product over its subfields has been applied to break the trivial bound of ℓ -torsion of class groups for elementary abelian extensions, along with an estimate better than GRH-bound. In this talk, I will explain its non-abelian counterparts. This is a joint work with Cui, Fleischer, Gu and Liu. (Received January 25, 2022)