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## On the Kegel–Wielandt $\sigma$ -Problem

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**Abstract**—For an arbitrary partition  $\sigma$  of the set  $\mathbb{P}$  of all primes, a sufficient condition for the  $\sigma$ -subnormality of a subgroup of a finite group is given. It is proved that the Kegel–Wielandt  $\sigma$ -problem has a positive solution in the class of all finite groups all of whose nonabelian composition factors are alternating groups, sporadic groups, or Lie groups of rank 1.

**Keywords:** finite group,  $\sigma$ -subnormal subgroup, Kegel–Wielandt  $\sigma$ -problem, Hall subgroup, complete Hall set.

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