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Artinian and Chernikov groups

The author plans to give a detailed survey of results relating to the important direction of investigations in the theory of groups defined by Artinian and Chernikov groups (results of S.N.Chernikov, V.P.Shunkov, A.Yu.Ol'shanskii, O.H.Kegel and B.A.F.Wehrfritz, N.S.Chernikov,...). For instance, the following new author's proposition contains a lot of known theorems connected with these groups.

Below groups of prime order are called simplest.

Theorem. *For a nonabelian binary finite group the following statements are equivalent:*

- (i) It satisfies the weak minimal condition on (abelian almost completely factorizable-by-simplest) nonabelian subgroups.*
- (ii) It satisfies the weak maximal condition on subgroups above.*
- (iii) It is Chernikov.*

Theorem above includes N.S.Chernikov's Theorem (1980) asserting that nonabelian binary finite groups with the minimal condition on metabelian nonabelian subgroups are Chernikov. At the same time, Theorem includes Shunkov's Theorem (1970) stating that nonabelian locally finite groups with the minimal condition on nonabelian subgroups are Chernikov. Also Theorem above actually contains S.N.Chernikov's (1951), Shunkov's (1970) and N.S.Chernikov's (1976) Theorems, asserting that respectively locally solvable, locally finite and binary finite groups with the minimal condition on abelian subgroups are Chernikov.

In the present lecture, the author also intends to dwell on A.Yu.Ol'shanskii's Examples of Artinian non-Chernikov groups.
