

SOME NOTES ON STABLE GROUPS

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The best examples of ω -stable groups are algebraic groups over the complex numbers. We try in Section 1 of this exposition to clarify what some model theoretic concepts mean in some quite concrete situations and write down for reference several simple facts which several model theorists have reconstructed several times each. We raise further questions directed at extensions of the Cherlin conjecture. These questions and related remarks are aimed at clarifying the distinction between the group theoretic and the geometric properties of an algebraic group. They emphasize the oft-mentioned, in the abstract, insistence that a stable group may have further structure. The comments here arise from lectures given at Notre Dame during the 1986-87 year. Several of the results arose in a number of discussions with among others Cherlin, Loveys, MacPherson, Marker, Martin, Nesin, Pillay, Steinhorn and Tanaka.

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