1151-20-260   **Clifton Edgar Ealy Jr.*** (`clifton.e.ealy@wmich.edu`), Department of Mathematics, Western Michigan University, Kalamazoo, MI 49008-5152. *Quasigroups with identity and simple groups.* Preliminary report.

{/bf Abstract.} Informally, a quasigroup with identity, briefly – a loop, is a group without the axiom of associativity. In 1939, Reinhold Baer showed how to obtain any loop as a "factor loop" of a group. In the early 1940's, A.A. Albert systematically studied quasigroups in two fundamental papers. Reinhold Baer's 1939 work naturally leads to the idea of a near normal subgroup. In this talk we will survey some loop theory, introduce the idea of the "loop cloud" of a group. consider some examples of near normal subgroups, and consider some properties of the loop cloud of a group; e.g. G is a non abelian simple group if and only if the loops in the loop cloud of G are not groups. /end{Abstract} (Received August 19, 2019)