1077-20-2154   **Jenya Kirshtein*** (`ykirshte@du.edu`), ykirshte@du.edu. *Recent results on Cayley-Dickson loops.*

The Cayley-Dickson loop Q_n is the multiplicative closure of basic elements of the algebra constructed by n applications of the Cayley-Dickson doubling process (the first few examples of such algebras are real numbers, complex numbers, quaternions, octonions, sedenions). A study of basic elements provides information about the underlying algebra, and is of interest, for example, in Lie theory and quantum physics. We discuss the structure of the automorphism groups, multiplication groups, and inner mapping groups of the Cayley-Dickson loops. (Received September 22, 2011)