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Jenya Kirshtein* (ykirshite@du.edu), 2360 S Gaylord St, Denver, CO 80208. *Multiplicative structures arising from Cayley-Dickson doubling process.*

Cayley-Dickson loop contains a closure of basis units of an algebra constructed by Cayley-Dickson doubling process (the first few examples of such algebras are complex numbers, quaternions, octonions, sedenions).

We will discuss properties of Cayley-Dickson loops, show that these loops are Hamiltonian and describe the structure of their automorphism groups. (Received August 31, 2010)