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Locally Finite Simple Moufang Loops

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Abstract: A Moufang loop is a binary system that satisfies a particular weak form of the associative law. Doro and Glauberman observed that there is a direct connection between simple Moufang loops and simple groups with triality. Using this correspondence, Liebeck proved that nonassociative finite simple Moufang loops arise from split octonion algebras over finite fields. We extend Liebeck's theorem to the case of locally finite simple Moufang loops.

Key Words: Moufang loop, group with triality, locally finite group