1043-20-24 **Stephen M Gagola III*** (sgagola@math.arizona.edu), Department of Mathematics, The University of Arizona, 617 N. Santa Rita Ave, Tucson, AZ 85721. *The existence of Sylow p-subloops in finite Moufang loops.*

A Moufang loop is a binary system that satisfies a particular weak form of the associative law. We prove that if L is a finite Moufang loop and p is a "Sylow prime" for L then every p-subloop of L is contained in a Sylow p-subloop of L. Here p is a Sylow prime for L if $p \nmid \frac{q^2+1}{gcd(q+1,2)}$ for all q for which a composition factor of L is isomorphic to the Paige loop $P(q)$. (Received July 12, 2008)