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Tuval Foguel* (tfoguel@aum.edu), Department of Mathematics, Auburn Montgomery, P.O. Box 244023, Montgomery, AL 36124-4023. *The Burnside problem for power associative loops.*

In a 1902 paper, Burnside introduced the Burnside Problem: Is a finitely generated periodic group of bounded exponent necessarily finite?

In 1968 S. I. Adjan and P. S. Novikov proved that the answer is negative.

In this talk we will ask the Burnside problem for a power associative loops of type \mathcal{P} , i.e. is a finitely generated periodic loop of type \mathcal{P} of bounded exponent necessarily finite?

We will show that the answer is negative for Bruck loops. (Received July 17, 2008)