Meeting: 999, Nashville, Tennessee, SS 14A, Special Session on Graph Theory and Matroid Theory

999-05-198 **Nolan McMurray** and **Talmage J Reid*** (mmreid@olemiss.edu), Department of Mathematics, University, MS 38677, and **Wei Bing**, **Bryan Williams** and **Haidong Wu**, MS. *Largest Circuits in Matroids.* Preliminary report.

Scott Smith conjectured in 1979 that any two distinct longest cycles in a $k-$connected graph meet in at least k vertices when $k \geq 2$. Reid and Wu generalized this conjecture to matroids. We establish several special cases of the matroid conjecture. We also consider matroid versions of results of Sean McGuinness on nearly longest cycles in graphs. (Received August 23, 2004)