

1069-57-71

**Martin Scharlemann\*** (mgscharl@math.ucsb.edu), Mathematics Department, UC Santa Barbara, Santa Barbara, CA 93106-3080. *Generating the genus  $g+1$  Goeritz group of a genus  $g$  handlebody*. Preliminary report.

If Powell was correct when he found a natural set of generators for the Goeritz group of the 3-sphere, his work would also suggest a natural set of generators for the Goeritz group of a handlebody. One might hope to reverse such an argument, proving Powell's conjecture by inductively finding generators for the genus  $g$  Goeritz group of a genus  $g - i$  handlebody,  $i = 1, \dots, g$ . The first step can be done using classical tools, but after that the classical approach gets murky. Is there a thin position argument instead, that would also work for the later steps? (Received January 13, 2011)