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George Kozłowski* (kozloga@auburn.edu), Department of Mathematics and Statistics, Auburn University, AL. *Cohomology of some non-metric mapping tori*. Preliminary report.

A construction of Jennifer Stone is generalized by producing a homeomorphism h of a certain zero-dimensional compact Hausdorff space Z for any sequence of integers, all greater than 1, and from h produces a continuum (the mapping torus of h) as in Stone's original procedure. Her homeomorphism corresponds to the inverse of the homeomorphism corresponding to the sequence $(2,2,\dots)$. The first (Alexander-Spanier) cohomology groups of the resulting mapping tori are calculated and display summands associated with solenoids along with an uncountable free group. The motivation came from Michel Smith who directed Stone's efforts on her Ph.D. dissertation and who was seeking an uncountable family of non-metric continua supporting Whitney maps. (Received September 09, 2007)