

Meeting: 1003, Atlanta, Georgia, AMS CP 1, AMS Contributed Paper Session

1003-22-1327 **Jon W. Short*** (jon@shsu.edu), Sam Houston State University, Department of Mathematics and Statistics, Huntsville, TX 77341-2206. *Local structure of the completion of a weakened topology on \mathbb{Z} .*

This author, in a paper written jointly with T. Christine Stevens, describes classes of topological groups that are obtained by weakening the topology of \mathbb{R}^n . These groups, as well as their completions, are shown to be locally isometric. Additionally, J. W. Nienhuys investigates, in a series of papers entitled *Not locally compact monothetic groups I & II*, the topological group structure of the completions of weakened topologies on \mathbb{Z} . In this talk, we will use results from Nienhuys's papers, the paper by this author, and new results to describe the local structure of the completions of weakened topologies on \mathbb{Z} . These topological groups are obtained by forcing a sequence (not convergent in the standard topology) to converge to the identity at a certain rate. Specific examples will be given. (Received October 04, 2004)