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Carrie Jean Trel* (carries@uwm.edu), Department of Mathematical Sciences, University of Wisconsin - Milwaukee, 3200 N. Cramer St., Milwaukee, 53211. *On \mathcal{Z} -Structures of Groups*. Preliminary report.

A \mathcal{Z} -structure on a group G , defined by M. Bestvina, is essentially a pair (\tilde{X}, Z) of spaces such that \tilde{X} is a compact AR, Z is a \mathcal{Z} -set in \tilde{X} , G acts properly discontinuously and cocompactly on $X = \tilde{X} \setminus Z$, and the collection of translates of any compact set in X forms a null sequence in \tilde{X} . It is natural to ask whether a given group admits a \mathcal{Z} -structure. In this talk, we will investigate whether direct products, free products, and certain free products with amalgamation admit \mathcal{Z} -structures under the hypothesis that each factor admits such a structure. (Received September 21, 2009)