κ-compactness, Extent and the Lindelöf number in LOTS

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Abstract

We study the behaviour of κ-compactness, extent and Lindelöf number in lexicographic products of linearly ordered spaces. It is seen, in particular, that for the case that all spaces are bounded all these properties behave very well when taking lexicographic products. We also give characterizations of these notions for generalized ordered spaces.