

Productively Lindelöf Spaces

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E. Michael asked whether every productively Lindelöf space is powerfully Lindelöf. We show that, assuming the Continuum Hypothesis, every productively Lindelöf space of countable tightness is powerfully Lindelöf. This strengthens a result of Tall and Tsaban. We also show that separation axioms are not relevant to Michael's question: if there exists any counterexample (possibly not even T_0), then there exists a regular (actually, zero-dimensional) counterexample. Also, we will present a forcing construction of productively Lindelöf spaces which might lead to a partial negative solution of this question.