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**John S Kulesza\*** (jkulesza@gmu.edu). *The loss of the Lindelof property in products of Sorgenfrey-like spaces.*

For each subset  $A$  of  $R$ , one can define a topology on  $R$  so that points of  $A$  have usual Euclidean neighborhoods, while elsewhere points have Sorgenfrey neighborhoods. These spaces were introduced by Hattori who along with others, has determined many of the possible properties of  $X_A$ , the space determined by  $A$ . Here we are concerned with how these spaces behave with respect to the Lindelof property in powers of a single  $X_A$ , with these results:

1. For each  $n \in N$ , there is  $A \subset R$  for which  $X_A^{2n+1}$  is Lindelof while  $X_A^{2n+2}$  is not.
2. If  $X_A^{2n}$  is Lindelof, then  $X_A^{2n+1}$  must also be Lindelof.
3. There is an  $A \subset R$  for which, for all  $n \in N$ ,  $X_A^n$  is Lindelof, while  $X_A^N$  is not Lindelof.
4.  $X_A^n$  (or  $X_A^N$ ) is not Lindelof if and only if it has a closed and discrete subset of cardinality  $\mathfrak{c}$  if and only if it is not normal.

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