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***Products of  $k$ -spaces, and questions***

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**Abstract:** As is well-known, every product of a locally compact space with a  $k$ -space is a  $k$ -space. But, the product of a separable metric space with a  $k$ -space need not be a  $k$ -space. In this paper, we consider conditions for products to be  $k$ -spaces, and pose some related questions.

**Keywords:**  $k$ -space, sequential space, strongly Fréchet space, bi- $k$ -space, strongly sequential space, Tanaka space

**AMS Subject Classification:** 54D50, 54D55, 54B10, 54B15