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On $\mathcal{K}$-starcompact spaces. (English) Zbl 1134.54314

Bull. Malays. Math. Sci. Soc. (2) 30, No. 1, 59-64 (2007).

Summary: A space X is $\mathcal{K}$-starcompact if for every open cover $\mathcal{U}$ of X, there exists a compact subset K of X such that $St(K,\mathcal{U}) = X$, where $St(K,\mathcal{U}) = \bigcup\{U \in \mathcal{U} : U \cap K \neq \emptyset\}$. In this paper, we investigate the relations between $\mathcal{K}$-starcompact spaces and other related spaces. We also study topological properties of $\mathcal{K}$-starcompact spaces.

MSC:

54D20 Noncompact covering properties (paracompact, Lindelöf, etc.)
54B10 Product spaces in general topology
54D55 Sequential spaces

Keywords:

countably compact; star-compact; $1\frac{1}{2}$-star compact

Full Text: EuDML