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Generalized tri-quotient maps and Čech-completeness

Abstract: For a topological space X let $\mathcal{K}(X)$ be the set of all compact subsets of X. The purpose of this paper is to characterize Lindelöf Čech-complete spaces X by means of the sets $\mathcal{K}(X)$. Similar characterizations also hold for Lindelöf locally compact X, as well as for countably K-determined spaces X. Our results extend a classical result of J. Christensen.