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On Sequential and Selective Feeble Compactness

ABSTRACT: We say that a topological space (X, τ) is sequential feeble compact, if for every family $\{U_n : n \in \omega\}$ of mutually disjoint non-empty open subsets of X, there exists an infinite set $J \subset \omega$ and a point $p \in X$ such that the set $\{n \in J : W \cap U_n = \emptyset\}$ is finite for every open neighbourhood W of p.

A topological space (X, τ) is said to be selective feeble compact, if whenever $\{U_n : n \in \omega\}$ is a family of mutually disjoint non-empty open sets in X, then there are $x_n \in U_n$ such that $\{x_n : n \in \omega\}$ is not closed. This last property was introduced recently by García-Ferreira and Ortiz- Castillo.

When we study sequential feeble compact and selective feeble properties, we find some interesting facts. In this talk, I will present results concerning sequential and selective feeble compact topologies in the class of topological spaces and in the class of Tychonoff spaces.