

# On some relative versions of Menger and Hurewicz properties

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Let  $\mathcal{U}$  be a cover of a space  $X$  and  $A$  be a subset of  $X$ ; the star of  $A$  with respect to  $\mathcal{U}$  is the set  $st(A, \mathcal{U}) = \bigcup\{U : U \in \mathcal{U} \text{ and } U \cap A \neq \emptyset\}$ . In this talk we consider some recent relative star versions of Menger property and the corresponding Hurewicz-type properties, introduced in [1]. We show that the considered properties are between countable compactness and the property of having countable extent and study the behavior with respect the product with a compact space. Among other things we answer to some recent questions posed in [1].

- [1] L. KOČINAC, S. KONCA, AND S. SINGH, *Set star-menger and set strongly star-menger spaces*, Math. Slovaca, 72 (2022), pp. 185–196.

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