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## On $\theta$ -semiopen sets and separation axioms in topological spaces

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**ABSTRACT.** In 1963, Levine introduced the notion of semi-open sets in topological spaces. In 1968, Veličko introduced  $\theta$ -open sets and  $\theta$ -closure operator. In this paper, we introduce a new notion called  $\theta$ -semiopen sets which are stronger than semi-open sets but weaker than  $\theta$ -open sets. Moreover, we investigate some weak separation axioms by making use of  $\theta$ -semiopen sets and the  $\theta$ -semi-closure operator.

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