

## ON $R_L$ TOPOLOGICAL SPACES

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**Abstract:** The aim of this paper is to introduce a new separation axiom called  $R_L$  and study some of its fundamental properties.

**Keywords and Phrases:**  $L$ -bounded set,  $R_L$ -separation axiom, countably compact.

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### 1. Preliminaries

The notion of  $R_0$  topological space is introduced by Shanin [16] in 1943. Davis [4] rediscovered it independently and studied some properties of this weak separation axiom. Several topologists (e. g. [8], [9], [10], [13]) further investigated properties of  $R_0$  topological spaces and many interesting results have been obtained in various contexts. In the same paper, Davis also introduced the notion of  $R_1$  topological space which are independent of both  $T_0$  and  $T_1$  but strictly weaker than  $T_2$ .

Throughout the paper  $(X, \tau)$  (or simply  $X$ ) will always denote a topological space. For a subset  $A$  of  $X$ , the closure and interior of  $A$  in  $X$  are denoted by  $Cl(A)$  and  $Int(A)$ , respectively. Recall that a topological space  $(X, \tau)$  is said to be