

## ON 2-ABSORBING FILTERS OF LATTICES

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### Abstract

Let  $L$  be a lattice with 1. In this paper we study the concept of 2-absorbing filter which is a generalization of prime filter. A proper filter  $F$  of  $L$  is called a 2-absorbing filter (resp. a weakly 2-absorbing) if whenever  $x_1 \vee x_2 \vee x_3 \in F$  (resp.  $1 \neq x_1 \vee x_2 \vee x_3 \in F$ ), for  $x_1, x_2, x_3 \in L$ , then there are 2 of the  $x_i$ 's whose join is in  $F$ . A basic number of results concerning 2-absorbing filters and weakly 2-absorbing filters are given in the case when  $L$  is distributive.

**Keywords:** lattice, filter, 2-absorbing filter, weakly 2-absorbing filter.

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