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***Embedding 3-homogeneous latin trades into abelian 2-groups***

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**Abstract:** Let  $T$  be a partial latin square and  $L$  be a latin square with  $T \subseteq L$ . We say that  $T$  is a latin trade if there exists a partial latin square  $T'$  with  $T' \cap T = \emptyset$  such that  $(L \setminus T) \cup T'$  is a latin square. A  $k$ -homogeneous latin trade is one which intersects each row, each column and each entry either 0 or  $k$  times. In this paper, we show the existence of 3-homogeneous latin trades in abelian 2-groups.

**Keywords:** latin square, latin trade, abelian 2-group

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