# MORE RESULTS ON THE SMALLEST ONE-REALIZATION OF A GIVEN SET II 

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#### Abstract

Let $S$ be a finite set of positive integers. A mixed hypergraph $\mathcal{H}$ is a onerealization of $S$ if its feasible set is $S$ and each entry of its chromatic spectrum is either 0 or 1 . The minimum number of vertices, denoted by $\delta_{3}(S)$, in a 3 -uniform bi-hypergraph which is a one-realization of $S$ was determined in [P. Zhao, K. Diao and F. Lu, More result on the smallest one-realization of a given set, Graphs Combin. 32 (2016) 835-850]. In this paper, we consider the minimum number of edges in a 3 -uniform bi-hypergraph which already has the minimum number of vertices with respect of being a minimum bihypergraph that is one-realization of $S$. A tight lower bound on the number of edges in a 3 -uniform bi-hypergraph which is a one-realization of $S$ with $\delta_{3}(S)$ vertices is given.


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