1077-05-2666 Sabrina Allen* (allen18@illinois.edu), Jelsi Bolt, Ryan C. Bunge, Scott Burton and

Saad I. El-Zanati. On 2-fold G-designs where G has order at most 4 and edge-multiplicity 2.

For a positive integer k, let ${}^{2}K_{k}$ denote the 2-fold complete mutigraph of order k. If G is a bipartite subgraph of ${}^{2}K_{4}$, we find necessary and sufficient conditions for the existence of G-decompositions of ${}^{2}K_{n}$. We also report on some results when G is tripartite. (Received September 22, 2011)