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Hongliang Lu, Xingxing Yu and Xiaofan Yuan* (xyuan@gatech.edu), School of Mathematics, Atlanta, GA 30332. *Rainbow matchings for 3-uniform hypergraphs.*

Kühn, Osthus, and Treglown and, independently, Khan proved that if H is a 3-uniform hypergraph with n vertices, where $n \in 3\mathbb{Z}$ and sufficiently large, and the minimum vertex degree of H is greater than $\binom{n-1}{2} - \binom{2n/3}{2}$, then H contains a perfect matching. Huang, Loh, and Sudakov showed that if $F_i \subseteq \binom{[n]}{k}$ for $1 \leq i \leq t$, where $t < n/(3k^2)$, and every $|F_i| > \binom{n}{k} - \binom{n-t+1}{k}$, then F_1, \dots, F_t admits a rainbow matching, which is a variant of a partial result of a conjecture by Erdős. We show that for $n \in 3\mathbb{Z}$ sufficiently large if $F_i \subseteq \binom{[n]}{3}$ and $\delta_1(F_i) > \binom{n-1}{2} - \binom{2n/3}{2}$ for $i \in \{1, \dots, n/3\}$, then $F_1, \dots, F_{n/3}$ admits a rainbow matching. (Received September 06, 2019)